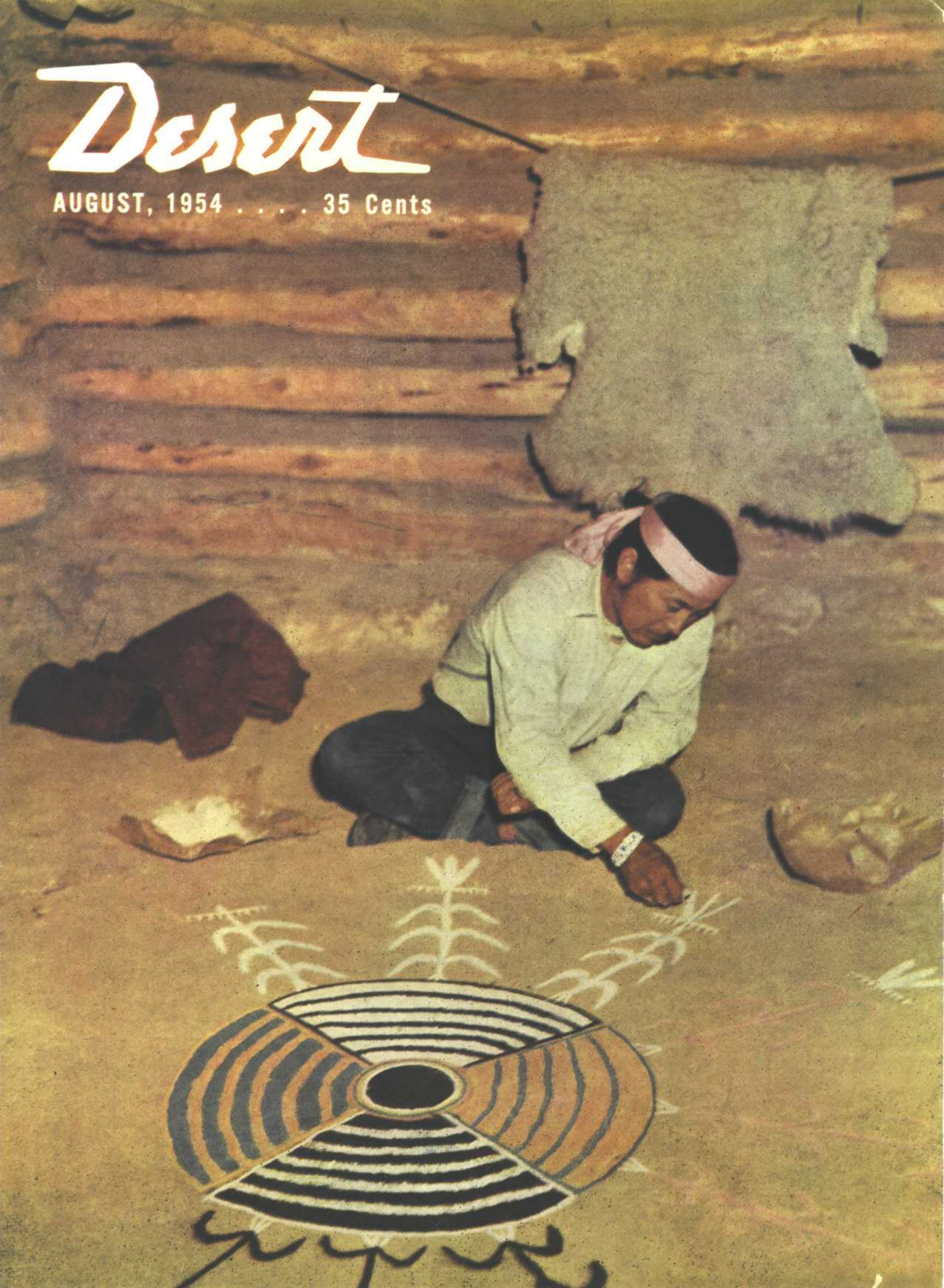


Desert

AUGUST, 1954 35 Cents

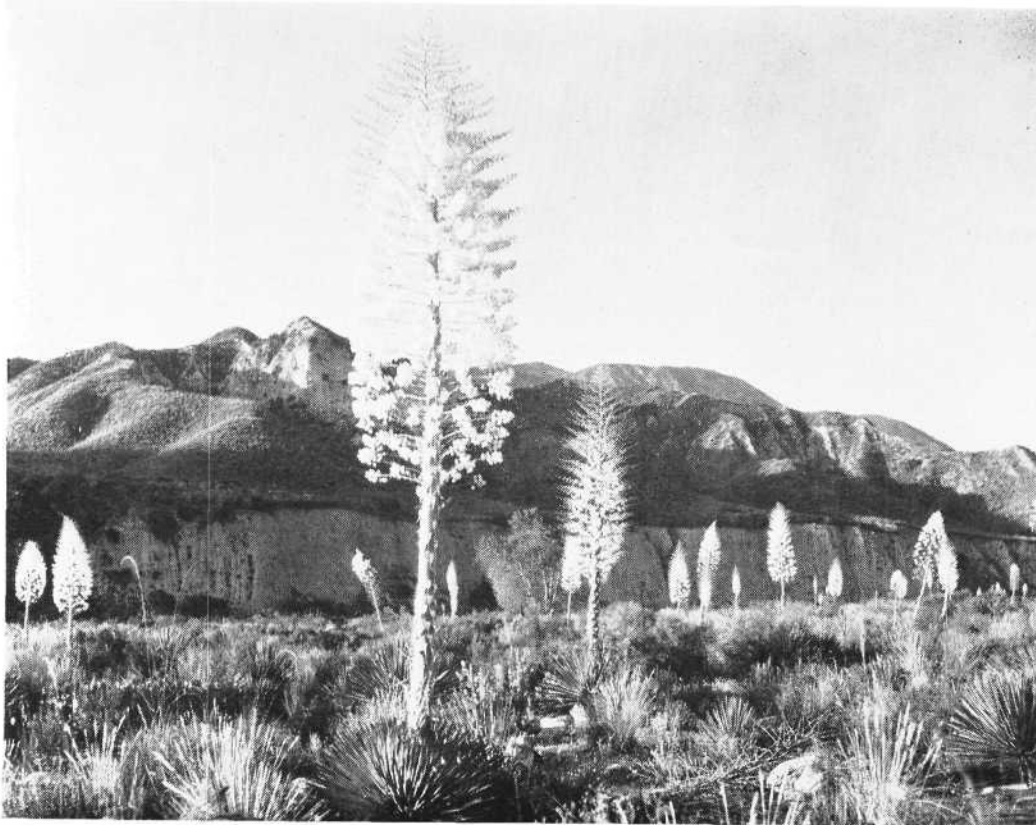




PICTURES OF THE MONTH

Indian Mother . . .

A proud Indian mother held her chubby papoose aloft for Photographer Andrew Crofut of Reno, Nevada, whose charming family portrait won first prize in Desert Magazine's June Picture-of-the-Month contest. The photo was made with a 4x5 Speed Graphic camera, Super XX film with flash fill, 1/100 second at f. 11-f. 16.



Yuccas . . .

Blossoming flower stalks saluting the sky, this field of Yuccas near Sunland, California, was photographed by Alexander Wiederseder of Altadena, California, second prize winner in the June photo contest. He used an 8x10 Eastman View camera, panchromatic film, 1/2 second at f. 16.

DESERT CALENDAR

August 6-8—Annual Reunion, Teddy Roosevelt's Rough Riders, Las Vegas, New Mexico.

August 7—Annual Smoki Ceremonials, authentic recreation of Indian rites and tribal ceremonials by the Smoki people, citizens of Prescott, Arizona. In Prescott.

August 7-8—Billy the Kid Pageant, Lincoln, New Mexico.

August 7-29 — 20th Annual Junior Indian Art Show, best paintings and art craft from reservation schools. Museum of Northern Arizona, Flagstaff.

August 12-14—Wasatch County Fair and Rodeo, Heber, Utah.

August 12-14—Sanpete County Fair, Manti, Utah.

August 12-15 — Inter-tribal Indian Ceremonials, daily parades, exhibits of Indian art and craft work, sandpainting demonstrations, evening programs of tribal dances and ceremonials. In Gallup, New Mexico.

August 13-14 — Northern Arizona Square Dance Festival, Flagstaff.

August 18-20—Cache County Fair, Logan, Utah.

August 24-31—Hopi Snake Dances, Walpi Indian Village. Caravan from Winslow, Arizona.

August 25-27—Junior Livestock Show, Richfield, Utah.

August 27-28—Kane County Fair and Horse Show, Orderville, Utah.

August 28-29—Tooele County Fair, Tooele, Utah.

August 29—Posse Parade and Barbecue, Sedona, Arizona.



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Number 8

COVER

Navajo Sandpainting. An Indian medicine man paints in colored sands on the hogan floor. The elaborate design, here showing corn stalks, is part of a sacred Navajo healing ritual and must be erased before sundown. Photograph by JOSEF MUENCH of Santa Barbara, California.

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RANDALL HENDERSON, Editor
BESS STACY, Business Manager

MARGARET GERKE, Associate Editor
EVONNE RIDDELL, Circulation Manager

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In ancient ceremony that may be becoming extinct, Hopi Snake Priest circles the plaza with rattlesnake between his lips. Fellow priests on the right hold other snakes honored in the rites. W. T. Mullarky photo, Gallup.

Revolt Against Ancient Gods

Distant thunder rumbled and rain impended after the Hopi Snake Priests paid homage to the underground water gods in their unique Snake Dance. Old people looked knowingly at each other with satisfaction. But the younger men talked of modern irrigation and the effect recent Washington actions would have on their tribe. Was this, as one young Hopi man predicted, the last Snake Dance on Walpi Plaza?

By DAMA LANGLEY

THE MOON edged above the jagged skyline, dousing the desert below with soft light as Mahla, a full-blooded Hopi Indian, her son, Kinale and I sat talking quietly.

Purple shadows receded, others grew, as the moon arched slowly into the star-studded heavens; an easy breeze blew against our faces.

We were encompassed by desert tranquility as we sat on Spider Shrine on the edge of the Hopi mesa, but there must have been turbulence in the hearts of the mother and son at my sides.

It was the day before the Hopi Snake dance in Walpi plaza, a tourist attraction equal to the Grand Canyon in northern Arizona and traditional Hopi rites first chronicled by de Tovar on his 1539 expedition through Hopi land.

"You may see the last Snake Dance ever to be held in Walpi Plaza tomorrow," Kinale said without remorse. "And it is time Hopis quit hopping around on one foot, dangling rattlesnakes from their mouths."

This was high treason! I recalled that when his mother allowed me her rooftop for living quarters years before, Kinale, then only a boy, was destined to become a snake priest.

"What happened to that plan?" I questioned.

"I cannot take part in kiva rites. I do not believe the things taught by the old men."

Mahla, who had sat quietly until now, spoke in her soft lilting voice. "It makes me sad that no son of mine is in the kiva learning about our Hopi deities. I can't remember when I did not scatter sacred meal on the plaza at Snake Dance time."

As cameras are now forbidden at the annual Snake Dances of the Hopi Indians, the pictures published with this story were taken many years ago, before the present taboo was adopted.

As Mahla and I left Kinale, brooding there in the moonlight, I knew there was no disruptive antipathy between them. Hopi family love is too powerful to be easily overcome, but Mahla must have been hurt and Kinale disturbed.

"Surely Mahla," I said, "you know young people cannot be held to this primitive life. They have been taught how to earn a living in offices and on irrigated farms and orchards."

"No, no. I want them to do what will make them happy and good. But for me, I am too old to live elsewhere, too old to leave the things I have always believed in and lived by. I still like to go into the warm kivas on winter nights and listen to stories our old people tell. I look forward to the bean sprouts the Kachinas bring each spring."

The bean sprouts Mahla spoke about are entwined in a Hopi spring



Hopi village on Walpi, one of nine main villages on three mesas overlooking the Arizona desert. At the base of the cliffs, gardens and small farms are planted.

ceremony. Early in the year each boy or man belonging to a society plants a handful of beans in a pottery bowl. They are tenderly cared for in the kiva where the fire is not allowed to burn low. Should one bean stalk be damaged all Hopi crops for that year would suffer. On a given day the bean vines are cut and the members take a portion home and hide them so that children may find them and believe the Kachinas, their gods, brought them.

After craving greens the winter long the green bean sprouts are a delicacy to the Hopi palates.

The Hopi Snake Dance is the acme of year-long tribal ceremonies that venerate their gods who control the rainfall which replenishes their springs and soaks their planting places.

The Hopis have nine main villages on three mesas overlooking the Arizona desert, Hopi country long before recorded history. At the base of the cliffs are the springs on which their sustenance depends.

Through starvation, raids by marauding tribes, pestilence, missionary efforts and government disapproval the blood-chilling sight of Hopi men holding rattlesnakes in their mouths and stomping around the plaza has continued.

There is a legend that ill-used daughters of the underground water gods, married to Hopi men, turned into snakes, bit their tormentors and slithered away into the depths of Grand Canyon, taking Hopi rain clouds with them.

The only way these important gods can be appeased is for Hopi priests to collect every snake that can be found at regular intervals and cajole them with dancing and warm hospitality. In

this way the gods are pleased and open the dams of underground streams to Hopi springs and blow rain clouds over Hopi fields to confer their munificence on the people.

Kinale had invited me to his mother's house "when the Moon of Green Corn wanes this year." I had met him in the waiting room of the office of Indian Affairs in Washington, D. C.

I discovered then he was a leader in a Hopi renaissance. Three years with the U. S. Marines had tamed the slim mischievous lad, I remembered,

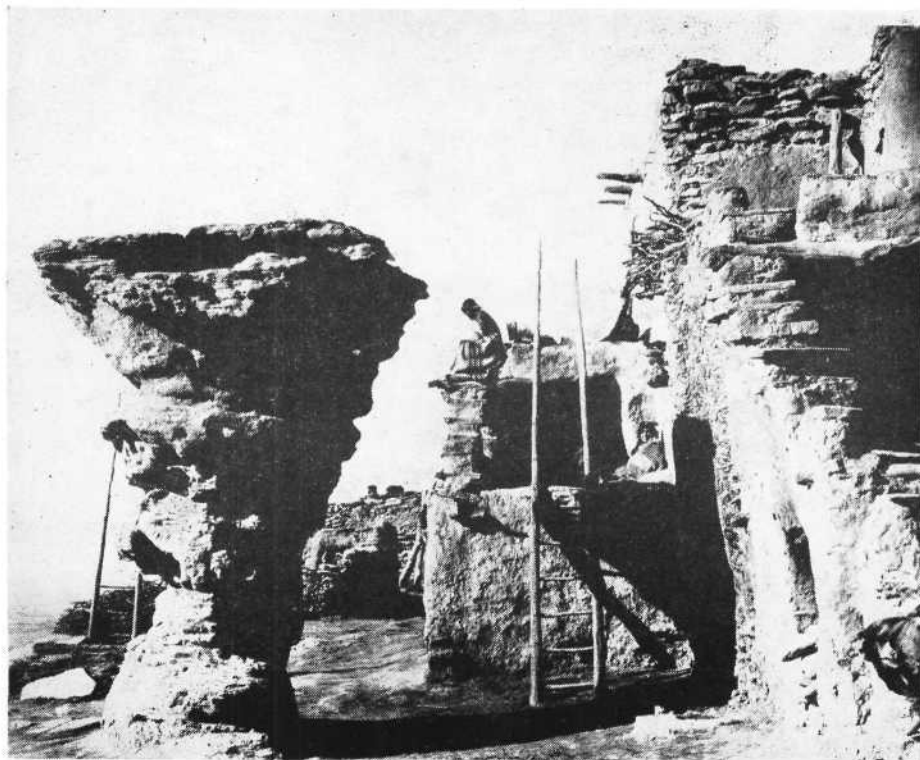
into a solid Hopi citizen. His thoughts were independent and resolutely centered on improving conditions of his people.

Some of the older Hopis frowned in the Indian office as Kinale told me "it's time for the Hopi people to quit burying their heads in the sand and face today's conditions."

He was concerned with bringing water to the Hopi Reservation through modern irrigation and power driven pumps from deep wells—without wooing undependable Kachinas.

The Hopis managed well before

Dance Rock in the plaza at Walpi.





Hugger stays closely at side of Snake Priest in ceremony, stroking the reptile with feathers and gently pushing its head away from the dancer's face. Photo courtesy Floyd C. Whipple, Winslow.

their population increased to 4000. Clumps of corn thrived in water seeps and compact little gardens flourished by springs where every drop of water was used.

Their peach trees, growing in sheltered coves along the mesa wall, thrust their roots deeply to find moisture and bare ample crops.

Life for the Hopis was usually good with plenty of corn and melons, desert plants and nuts they know how to use.

In 1882 an executive order designated 630,000 acres as a Hopi reservation. But the Navajos, too, were pressed for more land to graze their growing bands of sheep. Their population was steadily increasing and as it did they infringed on the Hopi reservation. The problem has continued until today and precious water is too soon used up, grass is snapped to the ground by the sheep's sharp teeth and scanty wood is quickly burned. There is not enough to go around.

To ask relief from Navajo crowding, Kinale and his Hopi companions had traveled 2000 miles to Washington, D.C. They were demanding removal of Navajos from Hopi land. And for good measure they wanted funds granted by congress to their tribe to be handled by other than Navajo agency officials.

Thousands of miles away from the reservation, I reviewed experiences with Kinale I had in Hano Village on Walpi when I was a guest of Mahla, his mother.

"Kinale," I questioned, "do you remember the day the snake chief came to your mother's roof top where I was writing, tried to smash my typewriter and ordered me to leave the village?"

"I do remember."

"He was angry because I predicted school boy Hopis would not be willing to spend their lives in the kivas, learning to be Snake Priests and that a time would come when nobody would be prepared to dance."

"I can see him shaking his fists yet," Kinale returned, "he told you 'there'll be a snake dance as long as Father Sun warms and brightens the mesa, and as long as Mother Rain breaks open the clouds over Hopi planting places.'"

Kinale was an example of my prediction.

His mother, a member of the Snake Clan by birth, placed him under the direction of her old uncle for training to be a snake priest.

Each morning he was sent down into the hot smelly kiva, a subterranean chamber symbolic of the underworld in much of Hopi ritual. Old

men were knitting socks and weaving belts or blankets, most of the time, and telling stories about the Kachinas.

"We stayed there all day and listened to stories about the Gods," Kinale related, "there must be 3000 different ones."

But Kinale was stubborn. Instead of learning songs and dances he would wait for the right opportunity and dash up the ladder and out to the desert.

Dutifully his mother would bring him back, but before she could sit down to her pottery bowls and jars he would be down the trail again and into the fields.

When forced to remain in the kiva, Kinale was a youthful revolutionist, creating confusion until little was learned, and he looked too long and searchingly at the Kachinas whom he declared were just men, not gods.

When he was flogged into the Snake Society, the whip wielder lashed him with vengeance.

"He tore the skin from my back," Kinale continued, "while old Crow-Woman Witch yelled at him to hit harder. When I dragged myself home I told my mother I would never go back, and I never did."

"I knew the Kachinas were only village men in masquerade and when I told my mother she hushed me up. For her sake I didn't say anything. But it takes more than an angry old man's word to keep the Snake Dance alive and I tell you its day is done."

It was Kinale's invitation that prompted me to return once more to Hano. And now as the Green Corn Moon bathed the shadowy courts and rocky stairways on the first Hopi Mesa, I was at home again on the house top of one of Hano's oldest dwellings.

Magic of desert nights never fades and I fell asleep looking into the starlighted azure of Arizona sky.

The first morning light fell on farmers hurrying down the trail to their fields. Hungry sheep were bleating for freedom from rock corrals. Women were sweeping their door yards and the courts with brooms of desert grass and I could hear the thump of grinding stones pulverizing corn into the powder-fine meal for piki making.

On the other side of the roof in a covered room Hahla was building a fire beneath the blackened piki stone, used for generations by women of that house. By the time my breakfast was over half a dozen neighbor women were there with their bowls of piki mixture waiting their turn to cook the thin ceremonial bread.

Piki is as old as Hopi history. It is a mixture of red or blue cornmeal and water. A pinch of sacred ashes are added on special occasions.

Mahla seated herself in front of the

stone with all the aplomb of a concert pianist. One swift swipe covered the surface with a handful of batter. It crisped to doneness before the gesture was complete. Carefully she lifted the thin sheet to a space beside her and folded and rolled it into a tight cylinder. Tubs full of the colored bread of the gods would be in every Hopi home before the day was over. Visitors would stare at it, ask dozens of questions, and perhaps buy a few rolls to take home as souvenirs.

Piney smoke became too much for me so I walked down the outside stone steps and wandered across the stony causeway into Old Walpi with its pueblos of uncounted rooms, the covered archways from court yard to plaza and the great Snake Dance Rock, center of the historic rites. I moved as closely to the Snake Kiva as decorum and the fiercely painted guard would allow. Above the hatchway hung the symbol of the society, an ear of corn, a coyote skin, shells and bits of pinyon green. They warned visitors away for solemn secret rites were in progress below.

The door yards and courts of the old village were animated with busy women. Some swept and patted damp clay into uneven places on the rocky earth. Others were washing the windows with their bright blue frames. Outdoor ovens, where dozens of loaves of bread would be baked that day, were filled with freshly lighted fires and tended in turn by the bakers. In every kitchen round loaves of yeast bread were covered with clean towels waiting to be shoveled into the community ovens and left for a time precisely measured in the baker's mind.

I strolled through an archway into a court and found a door screened with a wedding blanket, stretched between two posts. Behind, in a dim room, a newborn Hopi child lay on a pallet beside its mother. It was well-shielded from sunlight which by no accident should touch the baby during its first 20 days of life. Then its grandparents would carry it to the edge of the mesa and let the rising sun fall on its face while they dedicated it to Father Sun.

I know how annoyed a Hopi mother is when a "borning" falls at Snake Dance time. It means 20 days of seclusion when the mesa teems with visitors and when there is noise, color, excitement and feasting.

I watched Snake Hunters come in from their last search and hasten to the kiva where their catch was added to the other captives. There they were subjected to water baths, meal baths, songs, instructions, eulogies, explanations and apologies and an account of



Above—During the Hopi Snake Dance, Snake Priests stand chanting a prayer before the snake Kisi where snakes are kept until they play their part in the ceremony.

Below—Priests return to their kiva, symbolic of the underworld in many Hopi ceremonies. After washing paint from their bodies they return to their family homes for feasting. Photo from Riordan Collection.

Hopi hardships when the water gods failed to send moisture to the fields and springs.

Women of the priests' households sent prescribed food to their kiva-bound menfolk and planned good things for the feast to follow the Snake Dance and purification rites. Sheep were killed and dressed and hung in the cool inner rooms, green corn gathered, peaches carefully picked and stored out of reach of eager children. Bread and cake and sweet squash with

toasted pumpkin seed sauce, and plenty of hot sweet coffee would be waiting for the weary priests when they had finished their harrowing task.

The sun was sinking lower and the curious crowds of whites, who had been carefully screened at the foot of the trail for kodaks and cameras, were sitting safely above the plaza floor.

They grew suddenly quiet as a wrinkled old priest appeared and in his own language urged respect from the visitors. Then came the Wind

Roarer with his whirling stick that sobbed like a winter wind. He left and the Antelope Priests appeared and lined up to begin their constant chanting. There were only six of them, all old men. More than once at Walpi in other years I'd seen at least 20 Antelopes taking part in the dance.

The preliminaries over, we heard the rattle of turtle shells and jingle of silver ornaments from the Snake Kiva and five painted ancients trotted into the arena, each stamping sharply on the covered entrance to the underworld. They sang a quavering song and then, each with a companion called a "hugger," went to the kisa, the bower of cottonwood branches in which the sacks of snakes were concealed.

Each priest took a snake, placed it between his lips and made four circles around the plaza while the hugger stroked the reptile with a bunch of feathers and gently pushed its head away from the dancer's face.

A flip of the head and the snake was deposited at the foot of Snake Rock where a Gatherer picked it up. When all the snakes were so honored the gatherers tossed them into a meal sprinkled circle and rolled them around until dusty with ground corn.

Then five dancers grasped handfuls of snakes and ran down the trails to shrines where the reptiles were given orders to report the ceremony to the underground water gods.

The priests returned and drank heartily of the emetic prepared by the Snake Priestess. Purified they went down into their kiva to cleanse themselves of the paint they wore and make ready to join their feasting families.

As baffled visitors left, distant thunder rumbled and clouds were gathering over San Francisco Peaks. The older Hopi people looked at one another with satisfaction, but the younger men were not so concerned.

As I returned to Mahla's home I saw Kinale in a group of younger men. Their conversation was intense. As I passed Kinale was telling of an accomplishment. "The Indian commissioner has sent word our Hopi agency at Keam's canyon will operate through the Phoenix area office. Now if we can just get a survey made of our reservation line and have it made out of bounds for Navajos we'll have really gained a victory."

The last red ray deepened and died and I joined the feasters in Mahla's thick walled room downstairs. Whether or not this was the last time the Snake Brothers would be entertained at Walpi remains to be seen. But in the

hearts of some of the younger Hopis there is revolt against the ancient beliefs of the tribesmen—and perhaps Kinale's idea that wells and irrigation

ditches are a more dependable source of water than Snakes and Kachinas will find growing favor with the tribesmen of the future.

Desert Quiz

Here is *Desert Magazine's* test for those who know a great deal about the Great American Desert, or who would like to learn more about it. The questions include geography, history, mineralogy, botany, Indian life, and the lore of the desert country. If you score 12 correct answers you are ready to graduate from the tenderfoot class. Thirteen to 15 is good, 16 to 18 excellent. Over 18 is very exceptional. The answers are on page 28.

- 1—The mineral known as fool's gold generally is a crystalline form of—Iron pyrites _____. Zinc _____. Manganese _____. Aluminum _____.
- 2—Butterfield is a name best known in connection with—Gold mining in the West _____. Overland stage operation _____. Indian warfare _____. Negotiation for the Gadsden Purchase _____.
- 3—The salt in Salton Sea, California, comes mainly from—Periodic tidal waves from the Gulf of California _____. Salt beds in the bottom of the Sea _____. Drainage from salt flats in the surrounding terrain _____. Seepage from salt mines in the Chocolate Mountains _____.
- 4—A paleontologist is interested primarily in—Indian relics _____. The tree-ring measurement of time _____. Study of desert snails _____. Fossils _____.
- 5—A *Balsa* was used by the Colorado River Indians as—A weapon for killing game _____. A ceremonial headdress _____. An earthen jar for storing grain _____. A craft for crossing water _____.
- 6—Manly's *Death Valley in '49* was written by—An army officer _____. A California-bound gold-seeker _____. A fur trapper _____. An archeologist _____.
- 7—The species of cactus regarded as the best source of water for desert travelers is — Cholla _____. Saguaro _____. Prickly pear _____. Bisnaga _____.
- 8—In the United States there are no workable deposits of — Molybdenum _____. Nickel _____. Tungsten _____. Aluminum _____.
- 9—To see the Henry Mountains at close range one should go to—Arizona _____. Utah _____. Nevada _____. California _____.
- 10—Motoring from San Diego to El Paso over Highway 80, you would not pass through one of the following towns — Yuma _____. El Centro _____. Wickenburg _____. Lordsburg _____.
- 11—Moab, Utah, is located not far from the banks of the — Green River _____. Rio Grande _____. Yampa River _____. Colorado River _____.
- 12—Leader of the historic Spanish expedition in search for the Seven Cities of Cibola was—Cortez _____. Escalante _____. Coronado _____. De Anza _____.
- 13—One of the following Passes is not on the California desert—San Gorgonio _____. Daylight _____. Raton _____. El Cajon _____.
- 14—Historic Piper's Opera House was located in—Tombstone _____. Virginia City _____. Goldfield _____. Jerome _____.
- 15—Leader of the first camel caravan across the American desert was—Beale _____. Whipple _____. Bridger _____. Williams _____.
- 16—*Phainopepla* is a species of desert — Rodent _____. Lizard _____. Bird _____. Cactus _____.
- 17—The Totem Pole is a well known landmark in—Monument Valley _____. Bryce Canyon National Park _____. Capitol Reef National Monument _____. Death Valley _____.
- 18—Ouray is the name of an Indian reservation in — Utah _____. Nevada _____. New Mexico _____. California _____.
- 19—Clyde Forsythe is—A writer of western novels _____. A painter of the desert landscape _____. A senator from Arizona _____. Superintendent of Grand Canyon National Park _____.
- 20—The Amargosa desert is—Near the Great Salt Lake _____. On the California-Nevada border _____. In southern Arizona _____. In New Mexico _____.

ON DESERT TRAILS WITH A NATURALIST - V

The Ghost that Refuses to Die

Old-timers aren't particularly excited about the promise-packed promotion scheme underway since April at the ghost town of Hesperia, California. It has happened before. Several times in the past 75 years, promoters with plans just as grandiose and newspaper advertisements even gaudier have tried in vain to bring the town back to life. But maybe this time the never-say-die ghost on the California desert will make the grade. Edmund Jaeger recalls his unique introduction to Hesperia in 1918, his early botanizing trips there and the town's history since.

By EDMUND C. JAEGER, D.Sc.
Curator of Plants
Riverside Municipal Museum
Sketches by the Author

IN THE SPRING of 1918, seeking solitude for study and thought, I packed my faithful burro with a few necessities and a good supply of food and ascended the eastern slope of California's Palomar Mountains. In a small green tree-bordered valley near the mountain's east end, I set up camp.

It was interesting country as well as beautiful. Not far from my campsite stood a small building which had served as one of San Diego County's first back-country postoffices. It was a 7x9 foot log cabin with chimney and fireplace and two slab-sided lean-to additions. A Mr. McQueen and his daughter, Nellie, had lived in the cabin, I discovered later, and one of the lean-to appendages had housed the postoffice which had been named "Nellie" in honor of its first postmistress.

When chill autumn days came, I fixed up what was left of the place for temporary shelter. It took some ingenuity and a great deal of work to make it comfortable. The ground squirrels and gophers, entering through the rotted boards of the floor, had filled the place half with earth, and for years tall nettles had grown up through the openings that once were windows and doors. The stone chimney had fallen down and doors and windows were gone.

To keep out the wind and cold, someone who had formerly occupied the place had papered the walls several layers thick with copies of the *San*



Three-storied, 28-room hotel at Hesperia, ghost town in San Bernardino County, California. After several similar schemes failed, promoters are again ballyhooing the townsite. Their grandiose plans include making a museum out of the hotel.

Diego Union, most of them bearing dates between 1882 and 1889. The not-too-good paste used to wed paper and wall had been made of wheat flour and water. Much of the paper had been nibbled by mice attracted by the nutritious flour-paste, or had peeled off. But luckily for me much still remained. Many interesting hours I whiled away lying on my make-shift bed, a platform of fir boughs, tearing off bits of paper and reading the news items of the information-filled wall covering. Even the advertisements made enticing reading, especially those promoting in pompous language the sale of new lands and building lots in California's young boom towns.

One of these was an appeal to lot buyers to purchase lands in the newly laid-out town of "Hesperia on the Mojave River, Denver of the West" and located like the famed Colorado metropolis on the broad sloping plain "just east of the big mountains" and with an "equally fine climate, minus the cold."

Hesperia was destined to develop into a fine city of several hundred thousand inhabitants, the advertiser claimed. Soon there would be hundreds of acres planted to peaches, apricots and vineyards of choice raisin grapes. Among other attractions there were to be broad streets, three parks, a new hotel, three stories high and built of "bricks burned on the spot" and the largest newspaper (*The Hesperia Herald*) in San Bernardino County! Moreover, the Atlantic and Pacific Railroad went right through the center of the town!

The ads aroused my curiosity. I was eager to see what had materialized of the loudly ballyhooed city-to-be, and before the following year was over I visited Hesperia, determined to learn all of its history.

What I found in 1920 was certainly far from the Hesperia that was to have been. It was easy to see that the grand plans for the big city had never materialized. All I saw was a single store, a small railway station, a red brick

schoolhouse, a few not-too-prosperous looking orchards and vineyards, six or eight houses much in need of repair and a large imposing box-like three-story building of red brick, the once much-advertised hotel and now the most imposing structure remaining.

The big hotel of 28 guest rooms particularly interested me. After a long period of vacancy it recently had been repaired and reopened by two women who hoped to profit by the beginning surge of auto traffic over the newly improved "Old Trails Highway" between San Bernardino and Salt Lake City. Little did they suspect that only a few years later the new paved road to Victorville would by-pass Hesperia miles to the west, killing what little business the previous route had brought.

Mary F. Spencer, the botanist from Munich, had asked me to accompany her on a plant-collecting trip to Hesperia. She had engaged a room for me at the old hotel, a corner room on the third floor where I would have a grand view of the surrounding desert. I look back on it now as a most memorable day. I remember with pleasure the genial hostesses and the hotel's evening dinner of boiled whole potatoes, chipped beef and gravy, canned peas, homemade bread and country butter, and, for dessert, old-fashioned dried-apricot pie. For breakfast we were served ham and eggs, oatmeal with thick cream, stewed prunes, hot biscuits and honey, German fried potatoes and coffee. Simple meals they were, but well-cooked and graciously served.



Parish Larkspur (l.) and Palmer Evening Primrose, two plant species the author found growing among the Joshua trees on the desert around Hesperia.



At 7 o'clock next morning, a man driving a buckboard and two mules stopped in front of the hostelry and introduced himself as the guide the hotel managers had engaged to take us to "the very best flower fields anywhere to be found." He was a tall, lean, kind-mannered man with a Texas drawl. Of the numerous marvels of Texas we were constantly reminded. As he drove his mules along, and from time to time came to a particularly bright patch of flowers, he would suddenly draw up to a halt and exclaim: "O my, O my, O my, O my, O my, them's just like the purty flowers we had in Texas. Ain't them about the purtiest you ever did see?" There was no variation in his theme or in his manner of expressing it. It mattered not where we stopped nor what kind of flowers we saw, they were always "just like we had in Texas."

For several hours that evening Miss Spencer and I were busy sorting, pressing and labeling plants. Among our floral treasures was an unusually large form of Parish's beautiful pale blue larkspur (*Delphinium parishii*) which we had found growing among the Joshua trees just west of town. Down along the banks of the sandy dry bed of the Mojave River we had, by merest chance, come upon the rather rare short-statured yellow-flowered Palmer evening primrose (*Oenothera palmeri*) with its strange woody miter-shaped nutlets and thickish stems with papery peeling bark. The handsome blue-flowered Great Basin sage also had attracted our attention. This beautiful shrub, growing often in thickets in among true sage brush and juniper, blooms during late April and the first three weeks of May. It is worth going many miles to see in flower.

On a windy winter day of 1925 I was offered a chance to rent all 28 guest rooms of Hesperia Hotel for \$35 a month. It was unoccupied, and a man who posed as owner of the place tried to persuade me that it "would be a mighty profitable business" to use the

upper floor for a bootlegging establishment. "I would tell nobody you was up there," he promised, "and a pretty profit you could make of it." I had two students with me and these the man took to be my sons. "Why, if I had two sons like that I'd sure make a go of it. One could be hauling in grain and taking out the booze while you and the other boy could stay home and tend to the distilling."

"But what if I got in trouble with the law?" I asked. To that question he had a ready answer. "If you got caught, mister, perhaps you might go to jail for six months, but your time wouldn't be wasted; for you could use all those long days thinking up a way to do your booze-making better next time. Mister, you'd better rent my hotel. There is no place like it for making good money quick."

Needless to say, the offer was turned down.

To get an accurate account of the history of Hesperia, I recently spent several days at the San Bernardino Courthouse looking into the old record books of the county surveyors and assessors office.

The records date back to July 10, 1869, when Max Strobel acquired for \$44,000, 35,000 acres of land from the United States Government Land Office. He turned it over on August 2, 1871, to a group of Germans from San Francisco who proposed to subdivide and colonize it.

In the following year, these lands were taken over by the 35th Parallel Association with offices in San Francisco. It was really the same group of Germans associated under a new name. Their colonization plan never materialized, and on April 10, 1885, the Association sold out to Julius Finck. Six days later Finck sold out to a man named McNeil, who in the following year (May 6, 1886) sold out to the Hesperia Land and Water Company. This company was composed of the men who laid out the townsite of Ontario, California. Among them was B. M. Widney and the two Chaffey Brothers, George Jr. and William B.

Looking further into the old records I found that what had been tried in Ontario had been repeated in Hesperia. In giving title to the lands there was written in every deed the stipulation that if any liquor was ever sold, served or given away, even in the center of the streets in front of the land parcels, the title to the land would immediately pass back to the company.

According to an old map, this townsite as laid out by the Hesperia Land and Water Company consisted of about 40 blocks of 26 lots each, most of the lots measuring 25x142 feet.

These were offered for \$50.00 and upwards apiece. In addition there were many 10.40 and 11 acre plots and many 22 and 25 acre lots—a grand layout indeed.

Water was brought in from Deep Creek in the San Bernardino Mountains via a seven-mile, 14-inch steel pipe which ended in a reservoir.

After considerable land was sold, some of it to buyers as far away as England, a new company was formed to extend the boom. In the *Los Angeles Herald* of October, 1887, was reported: "One of the most important purchases of real estate ever recorded in Southern California was made yesterday afternoon by the following capitalists from New York: Lieutenant C. A. Barnes, S. A. Fleming and C. A. Smith, in connection with eminent capitalists from other parts of the country.

"The sale embraces the waters of the east fork of the Mojave, a cemented ditch four miles long and ten miles of steel and iron pipe for irrigation. The purchase includes the townsite of Hesperia, and the sold lands of the Hesperia company to be credited on the purchase, making the sum total of the purchase between one million and one million and a half of dollars.

"The purchasers will at once proceed to erect a hotel to cost \$75,000 and a sanitarium to cost \$25,000, the plans for which are already made.

"Fifteen miles of cement sidewalks will be made and half a dozen reservoirs constructed. A bank with a capital of \$100,000 has also been decided upon. The new purchasers will spend about \$750,000 in improvements making their outlay \$2,000,000, but as they get 2,000 inches of water, valued at \$1,000 per inch or \$2,000,000 in the aggregate with 33,000 acres of land beside, and the California Central Railroad running through the tract, they feel exultant over their bargain. They will irrigate on the percolating principle practiced in Fresno with such satisfactory results and will enter upon raising deciduous fruits and the manufacture of raisins, which grow to perfection. It is understood that the margin put up yesterday was \$200,000.00. The fruit planting on the purchased land will be on the largest scale ever started in the world, with a prospect of great profit. The company will have an electric light (sic) made by water power, of which they have a fall of 400 feet."

Hesperia now had its "second wind" but it was not to last. While everything seemed to be starting up fairly well, successive winter floods several times washed out the pipe line crossing under the river, and before it could be

Take Your Cameras to Gallup

Most photographers know—and a few had to learn the hard way—that Indians aren't the most cooperative camera subjects in the world. But in August, at the annual Inter-Tribal Indian Ceremonials at Gallup, New Mexico, the usual restrictions are relaxed. In fact, white visitors are urged to bring their cameras and capture on film the colorful ceremonies, the Indian dancers in their tribal regalia, the sand painters, the wagons and pickups and camping ground filled with representatives of tribes throughout the Southwest.

Indians are always good entry material for *Desert Magazine's* Picture-of-the-Month contest, although any subject is acceptable, as long as it is of the desert Southwest.

Entries for the August contest must be in the *Desert Magazine* office, Palm Desert, California, by August 20, and the winning prints will appear in the October issue. Pictures which arrive too late for one contest are held over for the next month. First prize is \$10; second prize \$5.00. For non-winning pictures accepted for publication \$3.00 each will be paid.

HERE ARE THE RULES

- 1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.
- 4—All entries must be in the *Desert Magazine* office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. *Desert Magazine* requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from *Desert's* editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA

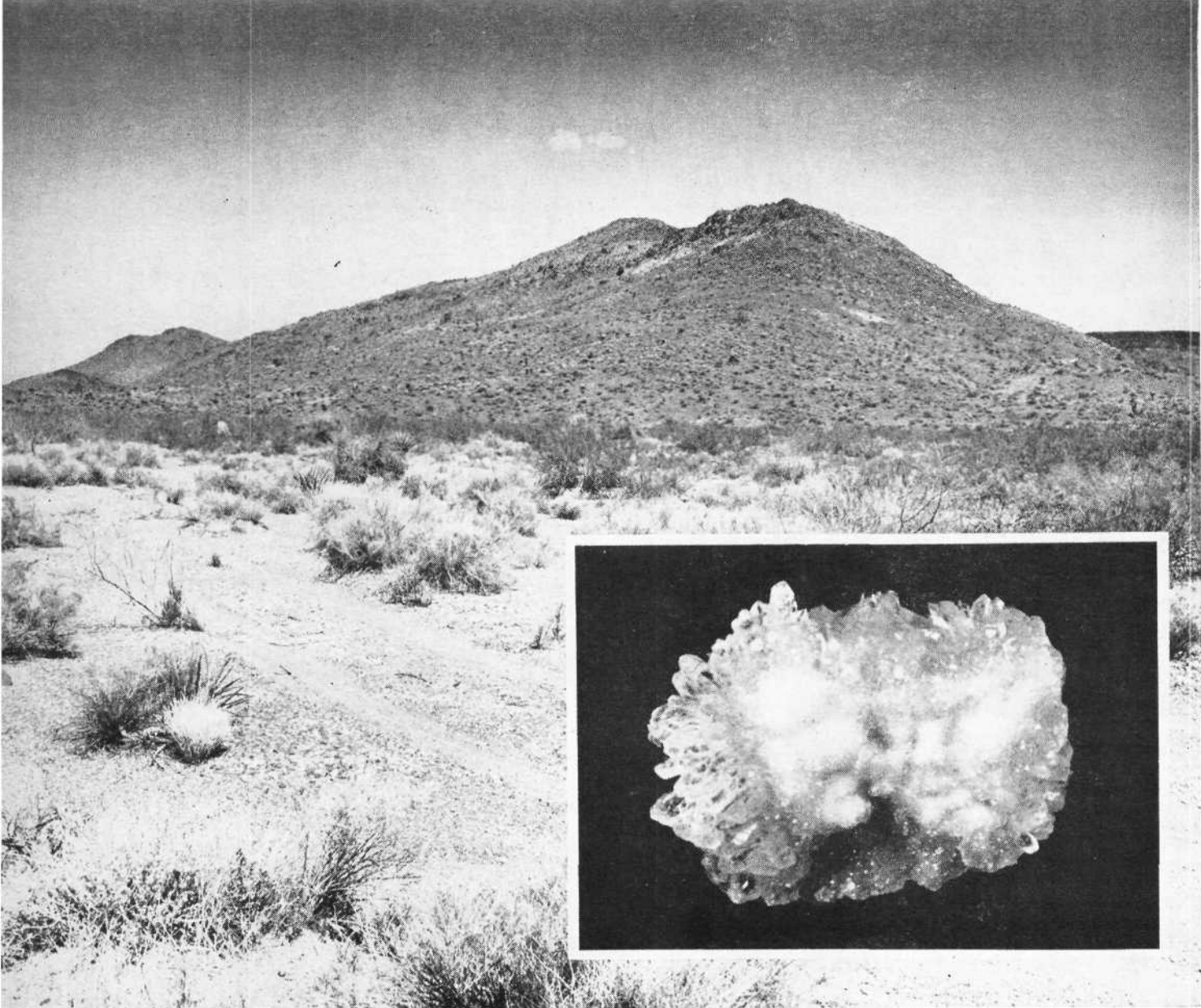
permanently repaired the young orchards and vineyards had suffered irreparable damage. Ranchers and townspeople became discouraged and left.

The lands in and around Hesperia reverted to desert and the site stands today much as it originally was, a broad plain covered by beautiful specimens of the giant tree *Yucca* (*Yucca brevifolia*). The old hotel, windowless and with most of its doors boarded up, seems the only reminder of the glory of Hesperia's past. Inside its walls may still be seen the remains of the grand staircase, the fireplaces, what is left of the "modern bathrooms with lead-pipe plumbing," the systems of speaking tubes that carried messages from floor to floor. But vandals have been there and until just recently it seemed certain that the grand hotel of the "Denver of the West" would be no more. But Hesperia is coming back again.

In mid-April of this year, the 35,000 acres of Hesperia property changed

hands once more, passing into the ownership of the Hesperia Land Development Company. The promoters, including former world's heavyweight boxing champion Jack Dempsey, began to promise big things for Hesperia—artificial lakes (one to be 2½ miles long), industry, agricultural development and residential buildings, a museum in the old hotel. They guessed they might spend as much as \$8,000,000 on the project.

Perhaps something will come of it, perhaps not. To old timers, the news has a ring all too familiar—much talk, splashy newspaper publicity, some sales, and then a sudden collapse of the boom. It has happened more than once before. There still is hope that the Joshua tree forests will be allowed to live on undisturbed, unharmed by "development"; and the inhabitants of the quaint little village may carry on about as before, content to know that again "The Denver of the West" failed to materialize and that their desert home will remain unspoiled by the heavy hand of commercialism.



Crystal Rose Hill in the Eldorado Mountains of Nevada. Excellent crystal clusters, chalcodony roses and chalcodony-quartz roses (see inset) are found around its slopes.

Crystal Roses of Eldorado . . .

Eldorado Canyon, in Nevada's portion of Lake Mead National Recreational Area, fulfills its name's promise of fabulous riches. For the Nature lover and photographer there is spectacularly beautiful wilderness scenery; for the rockhound, exquisite roses of crystal and chalcodony; for the sportsman, good fishing in Lake Mojave, the new and popular reservoir behind Davis Dam. The vacationist will find pleasant resorts nearby and excellent campsites, and the amateur historian, a mining past which extends back to the 1860s.

By HAROLD O. WEIGHT
Photographs by the Author
Map by Norton Allen

MY FIRST VISIT to Eldorado Canyon in the Lake Mead National Recreational area on the Nevada side of Lake Mojave was in the hope of relocating a mineral discovery reported in this area nearly a century ago.

Dr. J. S. Newberry made the original strike, while wandering through

these mountains on foot early in 1858, with one eye enthralled by the gaudy display of vulcanism about him and the other watching for the bad Paiutes he had been warned were skulking in the vicinity. Later he wrote: "Five miles west of the (Black) canyon are some hills composed of soft amygdaloid, everywhere traversed by

crevices lined with beautiful specimens of opalescent chalcodony, and rosettes of crystals of quartz which have a stellar arrangement. The soft trap rock having been weathered away, these siliceous minerals are left covering the surface and sparkling in the sunshine like so many diamonds."

Doctor—or Professor—Newberry, whose name is commemorated by the Newberry Mountains farther down the Colorado, was at that time geologist with Lt. J. C. Ives' expedition, exploring the Colorado River. Four years before he had been with Lt. Williamson's Pacific Railroad Survey in California, and in 1859 he would accompany Capt. J. N. Macomb, exploring from Santa Fe to the junction of the Grand and the Green.

The doctor had been able to spend more time geologizing on either side

of Black Canyon—despite Ives' worry that he might be carried off by the Paiutes — because at that point the steamer *Explorer* went aground, and several days were taken for its repair.

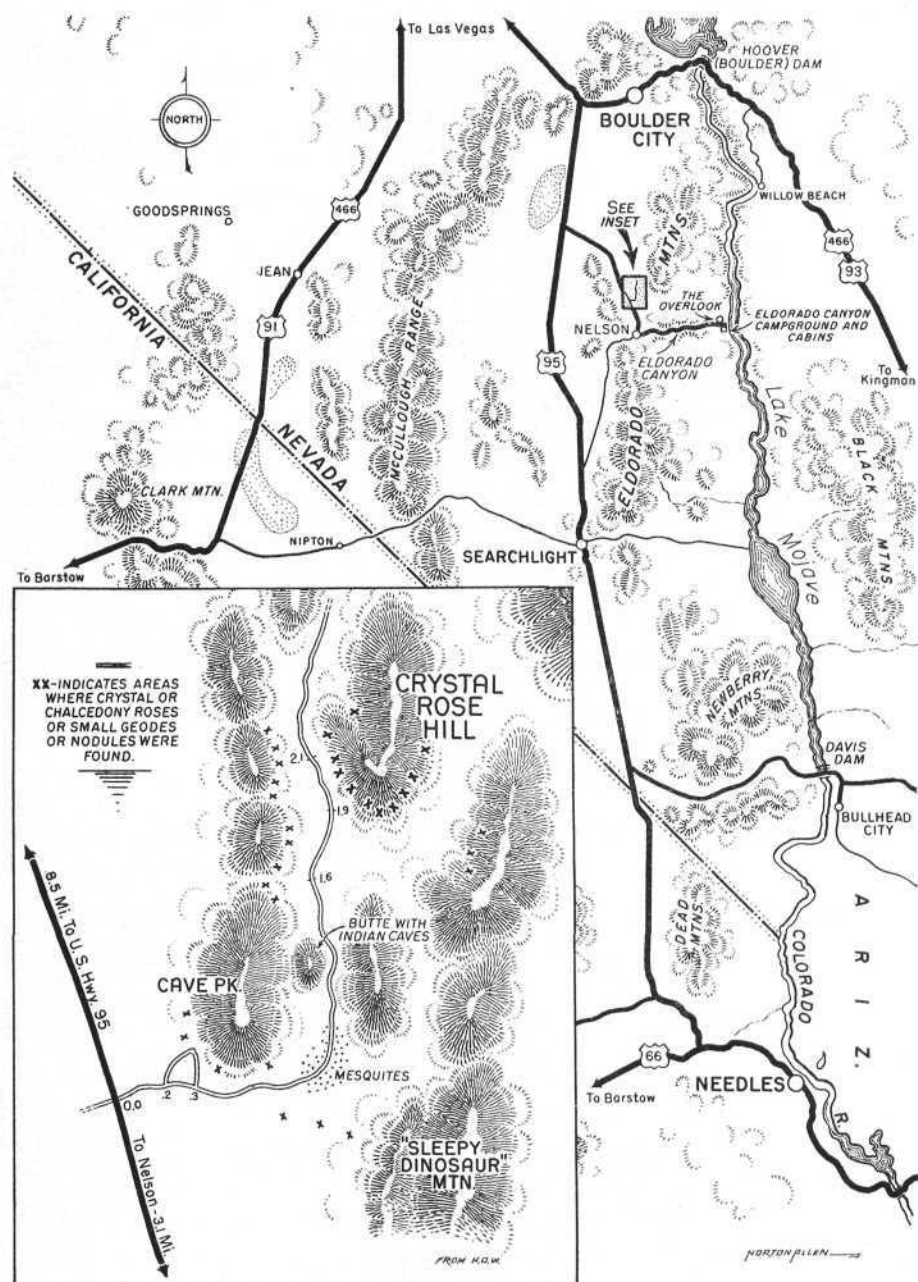
Ives was so impressed by the specimens Newberry brought in that he named the whole range west of the river the Opal Mountains. It held that name, both on maps and in mining reports well into the 1930s since which Eldorado seems to have been applied to the mountains as well as the canyon. Ives' description of the stones was enthusiastic. Some of them were opals, he said, which promised to prove valuable gems when polished.

I think Dr. Newberry made the more accurate identification. If the stones had turned out to be precious opal, there would have been further investigation, and surely we would have had later reports of its existence. Newberry's "opalescent chalcedony" is a fair description of the so-called "fire-agate" found in Meadow Creek Canyon, Arizona, and the Turtles and Coon Hollow in California. These stones have a thin coating, reportedly identified as iridescent limonite, between botryoidal layers of clear chalcedony, and cut into striking gems which flash red, green or yellow. Newberry's "rosettes of quartz crystals," of course, could be nothing but the beautiful crystal roses found in some areas with the equally charming but more common chalcedony roses.

My first trip into the Eldorados demonstrated that a low car was not the thing for crossing a rocky, rivulett-cut Nevada bajada. On a second expedition, soon after World War II, I found chalcedony roses, but did not have time to penetrate far enough into the rugged terrain.

Then this spring Lucile and I made a long-anticipated return visit to far-southern Nevada. We wanted to see what Lake Mojave had done for—or to—the country, and we also wanted to have a good try at relocating Dr. Newberry's gem field.

After visiting Eldorado Canyon, Lake Mojave and the little town of Nelson, we headed north on the paved highway toward U. S. 95. Several miles from Nelson we turned eastward over a ghost of a two-rut road. Usually we feel happier when we free ourselves from pavement on a rockhunting trip. Only then does the desert seem to move into close focus. From the highway it had seemed that Mojave yucca, just starting to bloom, and creosote bush were the only plants. But at our enforced slower speed we now saw magnificent clusters of cottontops, *Echinocactus polycephalus*,



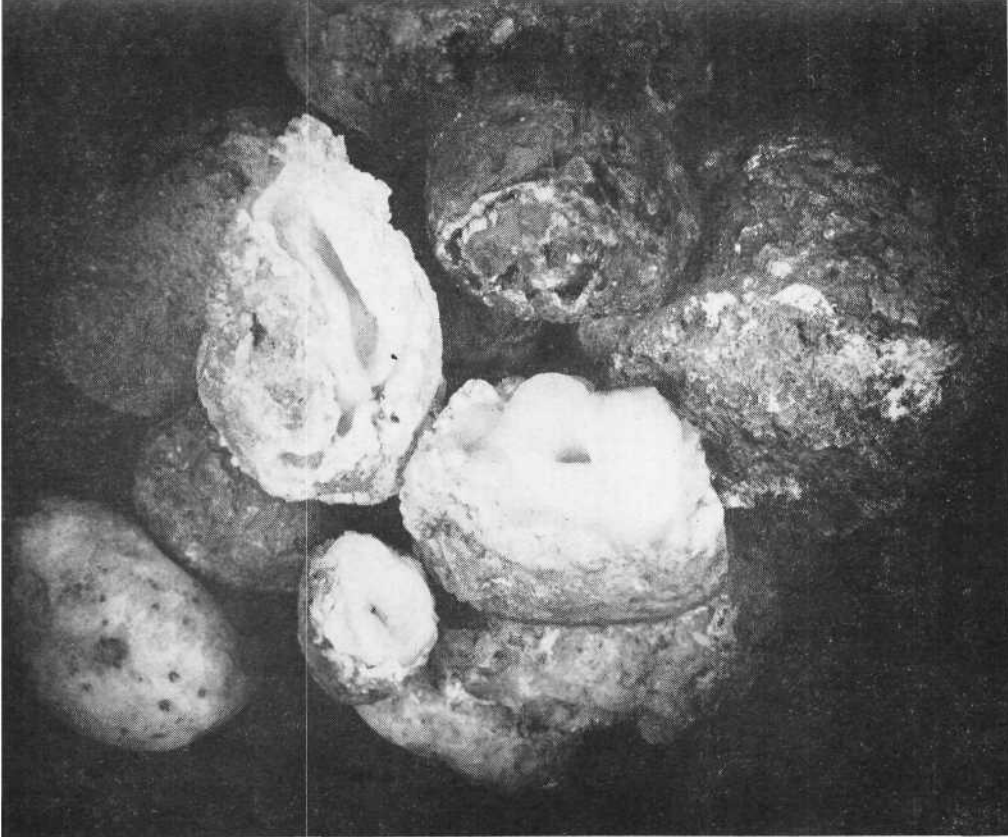
with heads almost too numerous to count, and *Opuntia ramossissima* and a small cholla which we took to be a stunted Bigelow.

But we soon had little time for anything but attempting to determine which way the tracks had gone. Again and again it was necessary to halt on the edge of a wash and scout on foot until old breaks in the brush showed where the trail had run. On one of these traverses I discovered that bits of chalcedony, agate and fragments of nodules were scattered over the bajada. At that time we were still less than two miles from the highway and it had taken more than half an hour to get that far. It was late afternoon, the wind was rising and the buttes for which we were heading were still several miles away.

The interesting float I had found

could only be coming from the volcanic hills to the south. The highway from Nelson passed right beside those hills. In fact, we had noted a dirt road which headed into them. Under the circumstances, it seemed the smart thing to see what those hills held before we spent half the night trying to reach more distant ones on a vanishing road.

At first it seemed we had made a bad decision. The little side road, which started so promisingly, ended dismally in less than half a mile in what must have been the town dump. But we were right at the foot of a splendid cave-pocked butte which was one of the group of hills from which the float had come. On its slopes almost immediately we came across chalcedony roses, tiny agate nodules and crystal geodes, and some unusual nod-



Nodules — some of which have chalcedony roses attached—and small crystal geodes are found scattered throughout the Eldorado field. Center rose-nodule is one and three-fourths inches long.

ules made up of orange-reddish and greenish opal-agate.

These specimens were weathering from grayish and brownish bands of volcanic rock which cut the northwest corner of the big butte and not from the brownish mass of the mountain itself. They were all in short supply, so I followed the specimen-carrying lava, which trended toward the southeast across a large sloping valley toward a ridged and plated mountain which looked like a sleepy dinosaur. The agates and nodules continued to crop out, and in a little wash in the edge of the valley I discovered an auto trail that escaped from the labyrinth of the dump and curved west and north into the very hills we wanted to reach.

Following the road, we soon were in a trough-like valley between the colorful ridges and buttes. The trail, rough at the start, was firm and passable, but in a little flat in the valley, it wound through a tiny jungle of barelimbed mesquites whose thorned arms whipped savagely at the passing car. The many caves made us wonder if Indians had occupied this country in the old days. The mesquites, indicating water and guaranteeing food, made it almost certain this had been one of their gathering places.

Ahead, on a little rise in the wash, towered a picturesque, teepee-like mass of rock whose large caves showed even from the distance. There, we agreed, would have been our residential district had we been cave-dwelling in that canyon. We stopped opposite the great rock and, sure enough, there

were smoked cave roofs, ash, pottery fragments, and arrow chippings. And the chipping showed, as always, the primitives had favored the most colorful stone their country offered.

Along this whole stretch of trail, something else had been piquing our curiosity. In almost every group of Lycium bushes were numbers of what appeared to be big thick and messy spiderwebs. Finally we just had to find out what kind of spiders would do such sloppy work. The webs proved to be the tents of tent caterpillars, literally packed with masses of the orangish-brown, blue striped bugs. It was a disagreeable shock to find these leaf-eaters in force among the too-few desert plants. They hatch from eggs deposited around twigs by the tawny yellow or brown moths which so frequently blunder into camp lights on warm summer nights. The hatching does not occur until the crop of young spring leaves is ready for them, and soon after the caterpillars construct their crude tents which, to me, seem horribly appropriate examples of communal dwellings.

The trail curved toward the grayish, cactus and yucca spotted ridges on the west and Lucile said decisively: "I think there are chalcedony roses over there. We'd better stop and look."

I couldn't see any evidence of them in the dulling afternoon light, but I have learned that it is well to accept Lucile's hunches about stone roses. Not only does she have a special fondness for these beautiful little natural gems, but she actually seems to be

what our friends to the south would term *muy simpatico* with them. And find them we did, weathering from the crumbly grayish and brownish rock which formed many clifflets on the steep slope. And scattered among the chalcedony roses we found flowers of rosettes of quartz crystals which might well have been the ones Dr. Newberry described in 1858.

So far as Lucile was concerned, right there was a good place to pitch camp. With darkness near and the wind starting to whine, we did halt for the night a short time later, in a curve in the canyon where a large isolated block of rock broke the direct sweep of the wind. Looking north from our campsite, we could see over the open bajada we had tried to cross earlier in the day, and on up the far slope to the prodigal lights of Boulder City, one of the most thoroughly electrified and modern towns on the desert. Looking up the canyon to the southward, after the moon had risen, we could see the dark bulk of the cavernous rock-mass where the ancestors of the Paiutes once lighted their feeble fires against darkness and fear.

During the night the wind subsided, and we hoped for a quiet day of collecting. But it was back for breakfast, at daybreak, and it brought a sharp, cold tooth along. Since we had warm clothing, however, it at least was an invigorating atmosphere for hiking and rockhunting. Lucile, sack in hand, immediately took off for the slope to the west where the roses grew. I set out on a sweeping hike to see if any of the hills on the east of the canyon supported stone flower gardens. There I found the best locality of the trip, a large hill which had such a multitude of specimens in such variety that we named it Crystal Rose Hill. There were little crystal eggs and crystal cups as well as crystal flowers and the "carved white jade" of chalcedony roses.

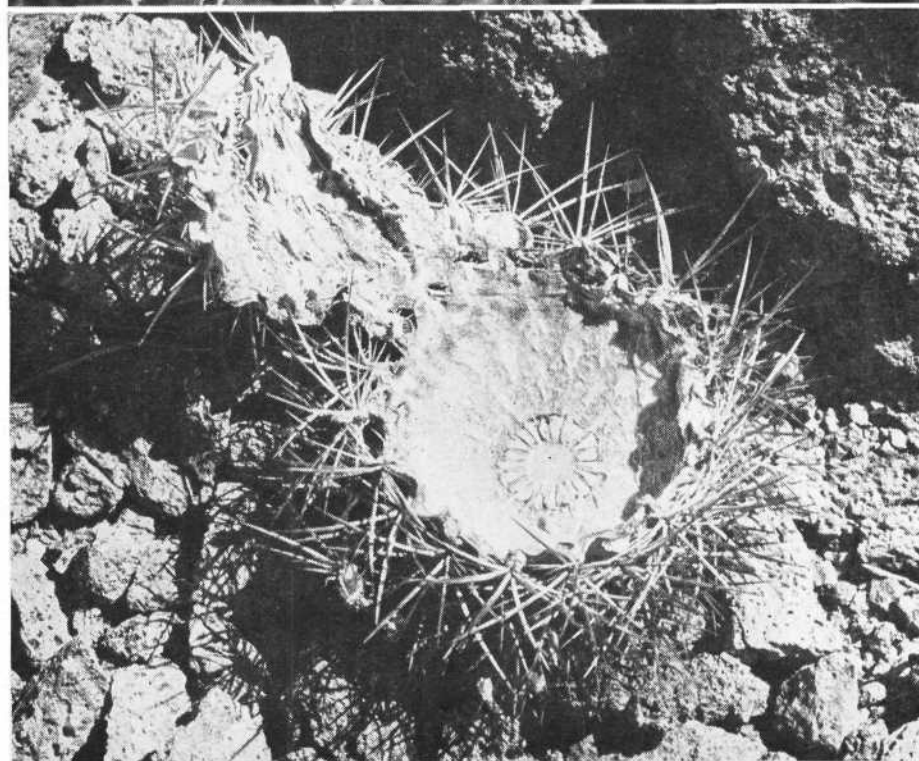
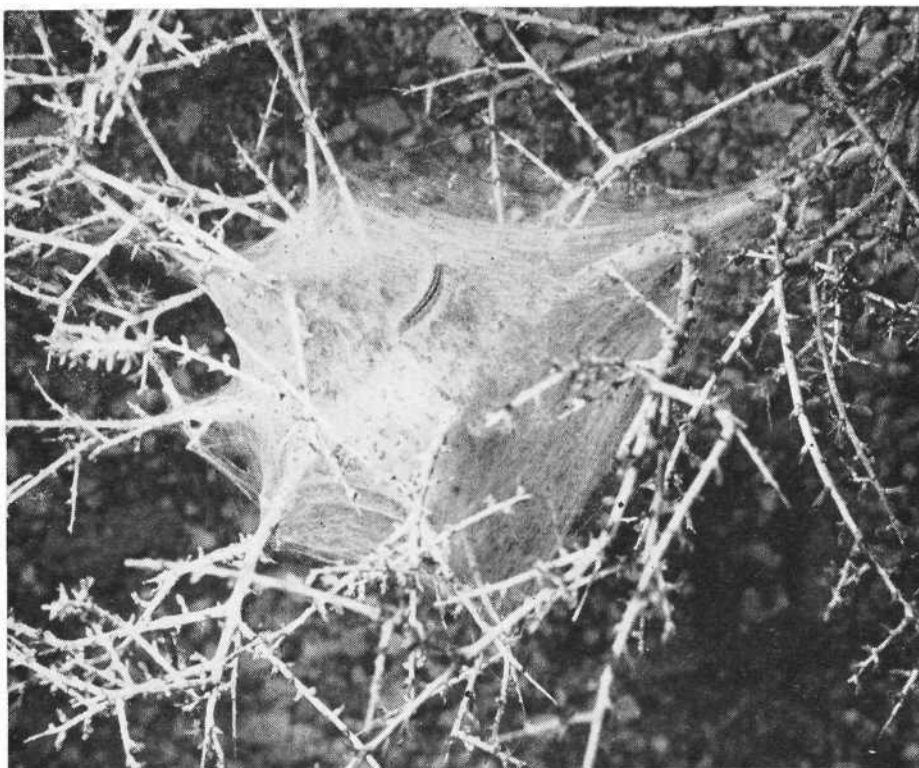
There was a surprising amount of vegetation in the washes and even on the hills. Mistletoe berries were ripening on the yet-leafless catsclaw on the canyon floor, and a few clumps of Indian Paint Brush were already in bloom. There were buckwheats, and cheese bush (*Hymenoclea*), deerhorn and beavertail cactus. We particularly noticed a lovely, straight-spined barrel-type cactus, most of it about a foot high, with full-swollen buds clustered at the top. And as I clambered over the rugged, rock-treacherous slopes I noticed here and there what seemed to be the round tops of these cacti which had been eaten out almost to the very point where the spines were

attached. I thought, idly, that there must be a very hungry rodent population in these hills and wondered how it had been possible for them to get the cactus tops off so neatly. Probably these were ones which had fallen in storms or because of disease, exposing the root area where spines did not protect.

But when I attempted to pick up the next piece—one nearly six inches across, I was astounded to discover that it was not the crown of the cactus, but the bottom, still apparently healthy and deeply rooted into the hillside. By some method, still inconceivable to me, the creatures that had eaten the cactus to the rind, as we would an unusually tasty melon, had gotten into their meal directly through the plant's supposed barricade of sharp spines. I suspect that packrats are responsible, as their homes—some of which we had seen in the Indian caves—demonstrate that they can collect and carry even barbed segments of cholla. Perhaps Nevada's drouth years have made them desperate for moist food, or on the other hand this may be the normal diet of the rugged Nevada packrats when no mesquite or catsclaw beans or *Lycium* berries are available.

The cacti, eaten despite their Magi-not Lines, and the swarming thousands of tent caterpillars brought in the sharpest possible fashion a new realization of the constant, violent struggle for survival that everywhere underlies what seems to us visitors the serene peace of the desert. Even the exquisite crystal and chalcedony roses, which seem so delicate and fragile, are creations of and survivors from violence and struggle beyond our comprehension. And dainty though they seem, they have survived the actual wearing away of the mountains and rocks in which they were made.

As to just how they were created in their marvelous and dainty shapes which so please our esthetic senses, I have never seen a logical or even reasonably complete explanation. It is easy to understand how great flows of molten rock could have trapped gas and how the gas left hollow pockets in the hardened rock. It is possible to imagine silica-rich water percolating in and filling the cavities and evaporating, leaving its solid content. But why does the chalcedony forming out of that liquid take all those flower-like shapes, defying the law of gravity and every known ordinance of crystallization? Why doesn't it just cake flatly in the bottom of the cavity, as the water evaporates? Why do tiny clear quartz crystals arrange themselves in artistic rings around the rose-edges?



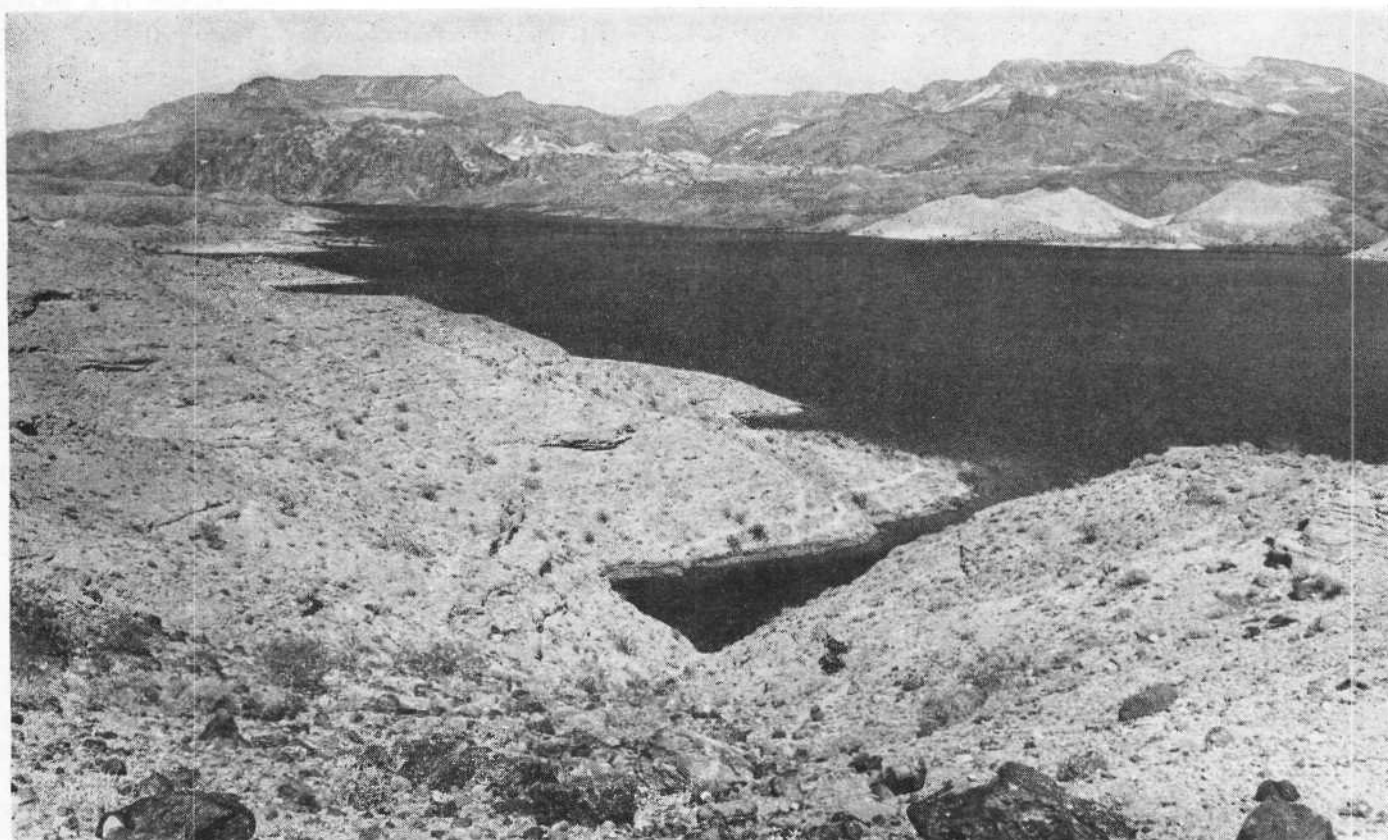
*Above—Tent caterpillars invade the *Lycium*, or thorn bush, in the Eldorado Mountains of Nevada. One caterpillar is shown on the "tent" and scores are packed inside it.*

Below—Thorns are not enough protection when hungry rodents attack the cactus on the Nevada desert. Here is the base of a fair-sized plant, eaten out like a melon right down to the taproot (center).

But then, any rock specimen raises enough questions to confound a college of philosophers.

We had found an area where beautiful crystal roses abounded, but we had not seen even a fragment of Dr. Newberry's "opalescent chalcedony."

We doubted, in fact, that we had even reached the actual field of "crystal rosettes" he had described. It had been our intention to continue to attempt to trace the doctor's wanderings. But by midafternoon the wind was driving with such force that it was



From the Overlook at the mouth of Eldorado Canyon, Nevada, one has a magnificent view of the upper part of new Lake Mojave, here filling part of Black Canyon.

difficult to breathe while facing it. Its voice was magnified in the caves into the moaning and shrilling of the furies, and it showed no intention of early abatement. Collecting no longer was pleasant, even for a hardened rockhound, so we headed back for the pavement.

We did not feel in the least unhappy that we still had a legitimate and compelling reason to come back and hunt again in the Eldorado Mountains.

ELDORADO LOG

- 0.0 Turn east from paved Eldorado Canyon highway, onto dirt road, 8.55 miles south of junction with U. S. 95, 3.1 miles north of Nelson, heading toward high peak with caves.
- 0.2 Road Y, keep right.
- 0.3 Road Y, keep right. Some collecting material on lower slopes to left.
- 0.7 Some collecting material extending undetermined distance to the south and southeast.
- 1.1 Indian Cave butte to the left.
- 1.6 Chalcedony and crystal roses checked on ridges to the west.
- 1.9 Crystal Rose Hill collecting area to the east (field extends undetermined distance). Roses also checked on slopes to west.
- 2.1 Roses on hills to west.

THE *Desert* MAGAZINE CLOSE-UPS

Cap and Olga Smith of Des Moines, Iowa, whose prize-winning story of Carl and Margaret Walker's success attracting desert birds to their California ranch appears in this issue, spent last winter with the Walkers on their Gold Rock Ranch near Tumco. They were immediately impressed with their friends' affection for wild birds and the enjoyment they derived from feeding and watching them.

They told the story—and won first prize in the recent *Desert Magazine* contest in which entrants wrote of their experiences bringing desert birds to their homes.

Although it's a first for Cap, Olga has been a *Desert* winner once before. Her story of Kitty-Tom the cat and the wild animals which used to visit the Smiths' mining camps (July, 1953) won first prize in *Desert's* 1953 Life-on-the-Desert contest.

Mrs. Smith, a former Des Moines school teacher, received her education at Des Moines and Drake universities, the University of California, Berkeley, and Western Reserve, Cleveland, Ohio. Mr. Smith, a native Arizonan, is a civil engineer.

The visit at Gold Rock was a pleasant substitute for the Smiths' usual winter trip to their copper and gold mining claims on the Lechuguilla Desert southeast of Wellton, Arizona. The claims are part of a government bombing range and are closed to the public.

* * *

"Increased Comfort and Efficiency in Summer Heat," in this issue of *Desert Magazine*, is from the Air Force publication, *Afoot on the Desert* by Alonzo W. Pond.

Pond knows the deserts of the world from personal exploration. He spent four months in the Gobi of Mongolia with the famous explorer, Roy Chapman Andrews; led four expeditions of his own to Algeria and the Sahara, including one to the Hoggar Mountains and the Tuareg country; navigated the San Juan River in Utah in 1933 and covered the Negev of Israel by bus.

Since these surface trips, he has explored by airplane the Near East from Damascus to Bagdad, Tehran, Kuwait, Dhahran, Saudi Arabia, Cairo and has made several flights along the coast to Tripoli and Libya. In recent years he made a special Sahara flight over the area he had covered on camel nearly 30 years ago. His last flight was to Timbuktu and Gao on the Niger River.

Birds are Welcome at Gold Rock Ranch

By CAP AND OLGA SMITH

Photographs by the Authors

AT GOLD ROCK RANCH, the desert home of Margaret and Carl (Dad) Walker, whether you sit on the wide porch overlooking the rock-walled patio, or in the spacious living room facing the bare rock mountains, sooner or later attention is directed to birds.

Margaret may jump up, hurry to the kitchen and come back with a can of cat food. As she spoons a generous portion and places it on a fence post near the living room windows she apologizes to a small gray bird with

When the Walkers first moved to Tumco, city-bred Margaret kept caged canaries to keep her mind off the wind. But she soon realized the entire ranch was a giant aviary, and gave the canaries away.

rusty underparts who, in his eagerness to probe into the delicacy, almost lights on her hand.

"Poor Old Crow," she croons, "sorry you had to ask."

You might not have heard the bird's sharp hunger cry that brought Margaret to her feet, and you might wonder as I did why she calls a Say's Phoebe "Old Crow."

"We had to call him something," she explains, "before we found who he was."

The Walkers, owners of the Tumco gold mines and ghost town in the Cargo Muchacho Mountains of southern Imperial County, California, have lived on the desert 30 years. Long ago they discovered what most desert dwellers come to know: that wild birds respond to kindness; that in return, each offers what he has to give—his own shy quota of companionship and entertainment.

"It was lonely those first years at Tumco," Margaret will tell you, "a terrible, empty loneliness."

And so it must have been to one accustomed to city life as Margaret was. Day and night the wind moaned through that bare rock canyon. Day and night the doors of a hundred empty buildings squeaked and slammed, loose tin on dilapidated roofs fluttered and wailed, rusty cans rolled endlessly, back and forth, back and forth, across the pallid tailings.

Dad Walker nailed the doors shut. He nailed down the wind-racked roofing. He was forever hauling cans away. But he could not stop the wind from moaning. And during a lull, the silence was even worse than the racket. In desperation, he bought his wife some canary birds and built an outdoor cage of rusty screen. The cheerful voices of those pet birds did help fend off the loneliness.

Then one day a little wild bird, the first Margaret had ever been aware of in the canyon, fluttered about the cage as if it wanted inside. Every day it

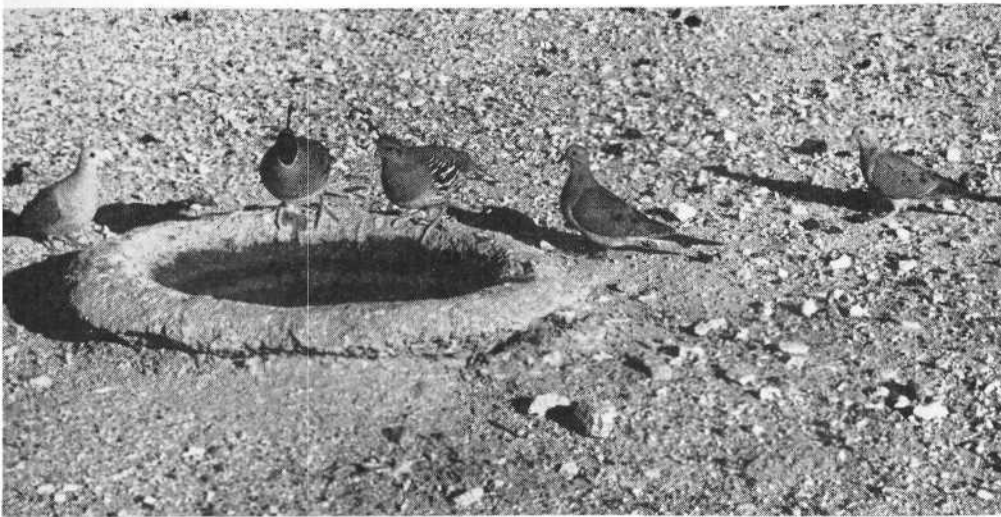
Just as vacationing humans often route their travels via favorite restaurants or resorts, so countless birds make Gold Rock Ranch near Tumco, California, an itinerary must. Some refresh themselves and fly on, but many have remained to enjoy the hospitality of Gold Rock's Nature-loving hosts, Margaret and Dad Walker. Here is the story of what the Walkers have done to attract birds to their desert home, and the entertainment and pleasure they derive from their winged visitors. Olga and Cap Smith wrote this first-prize winning story in *Desert Magazine's* bird contest which closed May 20.

came, a tiny green-backed goldfinch, picking holes in the rotten screen and crying pitifully. Without much trouble she caught the bird and put it in the cage.

For three years Margaret's first desert bird acquaintance lived happily in that cage with her canaries, drinking from their cups, eating the tiny seeds they discarded. By that time men were

When Dad Walker built Gold Rock Ranch, he did not forget the birds. Here and there about the property are bird pools and bird dishes which Margaret keeps constantly filled for her winged guests.





Gambel's Quail and mourning doves share a bird fountain on the Walkers' ranch. While the well was being repaired recently, Dad had to haul water in cans over a long rough trail. Four gallons a day in winter—and much more in summer—was added to the load for Gold Rock's birds.

working at the mine, Margaret was adjusting to her strange new environment, other birds had made themselves known. Kingbirds, finches, verdins, warblers, wrens, Gambel's sparrows, even humming and mocking birds, all seemed grateful for the water the Walkers spared from their own scant supply—water hauled in cans over a long, rough trail.

In hopes of finding water to mill tailings at the mine, Dad Walker sunk a 520-foot well on the flats three miles from Tumco. He was successful, the water good, and to save the well the Walkers homesteaded 160 acres around it, built Gold Rock Ranch.

They did not forget the birds. Dad built a generous bird pool, provided smaller bird dishes. Margaret gave away her canaries and set the goldfinch free. Soon the whistling of dove wings, the happy chatter of Gambel's quail, the warbling of rosy-headed finches became as much a part of Gold Rock Ranch as the gorgeous sunrises and sunsets.

For the past year, because of repairs on the well, the Walkers have again been forced to haul every drop of water they use over a long desert road. Each day in winter four gallons of that precious water are donated to birds, considerably more in summer. They also see to it that there always is food for the birds. Not only do they put out table scraps, but they keep a supply of alfalfa seed, suet, liver and cereals on hand. Friends augment these supplies with dried crumbs and bags of citrus fruit, the latter for the finches.

Old Crow and his mate have been star boarders at the ranch for twelve years. Nesting on a rafter under the

roof of the back porch, they have raised three broods a year, each averaging three to five birds. When the nest of sticks, hair and string became so bulky it overhung the rafter, Dad Walker, fearing the "babies" might fall out, tacked a square of cardboard between the rafter and the nest. Old Crow and his mate accepted their "porch" as if accustomed to such a convenience.

From his look-out post outside the living room windows, Old Crow guards what he considers his domain, scolding every bird who ventures near the house or bird dishes, sharing his post and his cat food with no one but his mate and offspring. Especially does he razz the shrike, who jealously guards his own station on a dead ironwood tree across the road, and who is not above stealing Old Crow's cat food when the phoebe is off on a bug hunt. Often Old Crow's frenzied cries are silenced only when one or the other of the Walkers frightens the ill-reputed shrike away.

From miles around, mourning and whitewing doves come to the ranch for food and water. Doves are heavy drinkers. They do not sip and raise their heads to swallow, but submerge their beaks and draw in deep draughts, much in the manner of horses. A flock can drain a bird pool in no time, leaving not a drop for the next flock or for Gambel's quail who often lag behind the doves. It is not uncommon for tardy doves to notify the Walkers of an empty pool. They do this by lining up on the ground and staring expectantly at the window.

The reputedly gentle mourning dove can be surprisingly aggressive in driving the more timid quail from the pool.

Their team-work strategy is for one to fly down from a nearby perch and threaten to light on a quail, who instantly dodges. A second dove threatens the same quail. Again he dodges. By the time the third or fourth dove makes a feint at him, the quail is on the run. Another favorite sally of the doves is to dart with a frightening clatter of wings across the vicinity of the pool, spooking every bird there.

In an attempt to photograph quail at the pool we became annoyed when for the fourth time the picture was muffed by doves. "Cut it out," we warned, "or you'll end up in a potpie."

Dad Walker, an interested spectator from his chair on the porch, shook his head. "Oh," he said, "I'd have to be awfully hungry before I could kill a dove."

Drama comes when the quail bring in their young for morning and evening drinks. Fifty or 60 featherballs, no larger than walnuts, stumble over twigs and pebbles, roll over, jump up, scamper on at the heels of their elders. Sometimes an impatient female pecks a little one not her own. The mother of the abused gives the interfering mother a good sound peck. A strutting cock decides to make something of this, is instantly challenged by another cock. Soon all the old folks are in a free-for-all fight, the forgotten babies knocked right and left. As suddenly as it began, however, the fight is over. The pool is rimmed with peaceably drinking quail, adult top-knots bobbing amiably, wee featherballs sipping confidently beside anybody's Mom and Pop.

Most true desert birds can manage without water, depending upon their food for moisture. It is transients and part-time dwellers that are most likely to need human help. Obviously, two bits of knowledge assist such birds: where man dwells there is water; doves go to water. Often a lost bird will appear with a flock of doves, as did a lone Brewer's blackbird one April evening. After drinking, the blackbird, chirping uneasily, perched all night on the Walkers' well derrick in order to drink his fill again before continuing his waterless journey at dawn.

When a thirsty bird finds a human habitation he begs with a confidence that is touching. Once a meadow-lark flopped down exhausted on Walker's porch. Margaret poured water in a saucer and the bird drank gratefully, then hung around the pool for several days to recuperate. Dad Walker tells of the strange little gray bird he could

not identify that came boldly to drink from a dry saucer at his feet. He filled the saucer with water, was about to set it down before the bird, when the thirsty traveler lit on the rim and proceeded to drink, tilting his head confidently.

Migrating western tanagers, under such necessity, seem particularly trustful of man. Dad tells of one that lit on his chair arm, then drank from the saucer he held in his hand. One March day seven of these brilliantly-plumed birds, evidently laggards of a flock on their way to northern pine forests to nest, drank at the pool. "They didn't pick up anything to eat," Margaret said. "Instead, they lit on that old ore wagon over there and watched the house as if they expected a handout." She quartered some oranges and grapefruit and the tanagers ate the fruit eagerly. They did not leave until two bags were empty.

Only this spring, when we were taking pictures of doves at the pool, a migrating western tanager fluttered down from an ironwood tree and lit on our tripod. Afraid to move, we were wondering what a photographer should do in this case, when the bird was frightened away by another flying friend of the Walkers, a jet pilot from a near-by air-base, who zoomed close to say a thunderous "Good Morning!"

Of all the birds that come and go, the Walkers concede the sprightly little Costa hummingbird, the bronzy-green midget with violet ruff, to be the most fascinating. At the pool, hummingbirds hover a foot above the water, let themselves down until their feet just touch it, take a quick sip, spin up, then drop down for another sip. Hummers are attracted by bright red. Often when Dad Walker is about his work, one will investigate a red bandanna dangling from his hip pocket, or a bright red can of tobacco he sometimes carries there. Margaret feeds these feathered jewels honey and water from a flask hung in a tree.

All birds are welcome at Gold Rock ranch. In return for bounty received, they leave priceless gifts. Not only do they contribute unforgettable moments, but in their trust and confidence they remind one of a time long ago. A time in the very beginning. A time when man dwelled in harmony with all living creatures.

(Next month, second prize winners Myriam and Elsie Toles tell how they attracted wild birds to their ranch home at the foot of the Chiricahua Mountains in southeastern Arizona.)

LETTERS

Traders on the Reservation . . .

Trumansburg, New York

Desert:

I am sure the June quiz proved tough on Dorothy Peters and her Nevada friends; I dropped to my lowest score in years. But there is one question I'll bone-pick with the quizmaster: No. 14, the answer to which is that Indian traders are "Licensed by the U. S. Bureau of Indian Affairs."

This is quite correct. But on many Southwestern reservations, if not on all of them, the answer "By the Indian Tribal Council" would be just as correct.

The written constitutions authorized by the Wheeler-Howard Act usually contain articles giving the tribal councils powers to license and tax businesses on tribal lands or otherwise regulate them. The Papagos have licensed traders for many years and tax them on a graduated gross income scale. The Navajos have had more trouble, due to the entrenchment of the trading system on their reserve, but their tribal council, too, has steadily exercised more regulation of traders.

Another type of trading system is practiced on the Hualapai Reservation in Arizona, where the trading post is tribally operated. Other businesses are licensed, however. The Pueblos maintain control over most outside business operating in their villages, and did so even before the Wheeler-Howard Act.

Aside from the formal arrangements of the organized tribes, it would be a rare case, I suspect, when the Bureau licensed a trader without at least informal prior approval from the tribe concerned.

HENRY F. DOBYNS

. . .

Follows Naturalist's Trail . . .

Los Angeles, California

Desert:

The series of stories, "On Desert Trails with a Naturalist," which are currently being published in *Desert Magazine*, are extremely interesting and informative. As a former student of Edmund Jaeger at Riverside Junior College years ago, I have always enjoyed his books and his articles in *Desert*. I am happy that you now are giving us readers more than just an occasional lesson by this dean of desert naturalists.

MRS. HARRY McMASTERS

With a Few Wild Guesses . . .

Reno, Nevada

Desert:

Well, we asked for it!

Although it stumped most of us, the June quiz was enjoyed and appreciated by our Nevada group of *Desert* fans. It was gratifying to get such prompt if brow-furrowing action on my letter of complaint (June *Desert*, p 27).

Highest score on the June quiz was made by William Cocking of Carson City, one of our less active desert rats. He admits his score of 17 correct answers required a lot of wild guesses—but he edged the rest of us to become Chief Desert Rat for June.

Thank you for putting so much thought and effort into producing a very enjoyable quiz. Our congratulations to the Quiz Master — may he continue the good work!

DOROTHY PETERS

Congratulations to Reader Bill Cocking for a good score (even though he did do some guessing) and for the award of a year's subscription to Desert, as offered in the June issue (see Letters page).—R.H.

. . .

Bushes on the Desert . . .

Greenfield, Colorado

Desert:

I agree with Mrs. J. W. Seargent (Letters, February *Desert*) regarding greasewood. She is for keeping this common name of *Larrea divaricata*, and so am I.

Chemisa is definitely a distinct shrub. An evergreen, it has needle-like leaves $\frac{3}{8}$ inches long and produces spikes of small white flowers. It is a hindrance to fire fighters and domestic animals.

Chaparral means enclosed by brush or covered with brush or dwarf trees, regardless of species.

SAMUEL CURRIER

. . .

In Time: A Layer of Tin . . .

Oceanside, California

Desert:

I see Junior Litterbug can keep up with Pop now—with empties of the throw-away cans recently adopted by the soft drink industry. But let's hope the Boy Scouts and Girl Scouts and other young clean-up crews can keep him in line.

I wonder what the anthropologists of 4000 A.D. will think when they come upon the rusty earth remnant of our splendid 20th Century civilization?

ANITA CRANBROOK

Increased Comfort & Efficiency in . . . **SUMMER HEAT**

If you live on the desert, or travel the desert during the summer months, drink plenty of water—even more than your thirst requires. For the hazards of undue exposure to the summer sun on the desert are due mainly to dehydration of the body—not to sunstroke.

Other rules: Ration your perspiration, not your water. Keep your clothes on—all of them—for a naked body dehydrates faster than a clothed body. Humans can adapt themselves to high temperatures—but not to lack of water. Chewing gum or keeping a pebble in the mouth are no substitute for water.

These are some of the conclusions published by the Arctic, Desert, Tropic Information Center of the U.S. Air Force after many years devoted to the study of man's survival on the desert.

By ALONZO W. POND, M.A.
Sketches by Margaret Gerke

THE NORMAL body temperature for man is 98.6°. Any variation, even as little as one or two degrees from that normal temperature, reduces your efficiency.

Patients have survived after a few minutes of body temperature as low as 20 degrees below normal (78.8° and 75.2°). However, their consciousness became clouded at half that drop in temperature.

In contrast, an increase in body temperature of six to eight degrees above normal for any extended period causes death. This fact is familiar to everyone. When sickness or disease causes the body temperature to go above the normal 98.6, we call it fever. High fever can burn up the patient so that in the case of sickness, efforts are directed to keeping the body temperature within bounds.

Body temperature in a healthy person also can be raised to the danger point either by absorbing heat or by generating heat too fast. The body absorbs heat from the air if the air is above 92° F. It can get from direct sunlight striking the body, radiant heat, even if the air is relatively cool. It can absorb heat reflected from the ground or it can absorb it direct from the ground by contact, as when you are lying down. Any kind of work or exercise, of course, produces body heat.

Regardless of where the heat comes from the body must get rid of the excess and keep body temperature at the normal 98.6°. This is done by evaporating sweat on the skin surface. It is a very effective and efficient process.

You can see how effective evaporation is in cooling if you fill a desert water bag and a canteen with water and hang them both in the sun. When the water in the canteen is 110° F, the water in the sweating desert bag will be only 70° F. Evaporation of sweat on the desert bag keeps it 40° cooler. Evaporation of sweat on your skin keeps your body temperature normal.

When you sweat, however, your body loses water. That is called dehydration. It is true that two-thirds of the human body is water, but every bit of body water is needed for circulation! Therefore when you lose body water by sweating, when you dehydrate, that loss must

Recently the Air University at Maxwell Air Force Base in Alabama published its findings in a monograph titled "Afoot on the Desert" for distribution to the armed forces stationed on or flying over desert terrain. Written by Alonzo W. Pond, Chief of the Desert Section of ADTIC, the 58-page booklet is not available for civilian distribution, but through the courtesy of Dr. Paul H. Nesbitt, Chief of the Arctic, Desert, Tropic Information Center, permission to use portions of the book has been granted to Desert Magazine.

Following is a reprint of the chapter "Water—How to Use It in Hot Deserts." The editors are presenting this information because human reaction to high temperatures is the same—whether one is in uniform or civilian clothes.

be replaced by drinking water. Otherwise the body pays for the loss in reduced efficiency. Actual, scientifically controlled experiments on men working in hot deserts have given us some figures on loss of efficiency compared to the percent of dehydration or loss of body water.

For instance, a man who has lost 2½ percent of his body weight by sweating (about 1½ quarts of water) loses 25 percent of his efficiency. Also it has been found that working in air temperatures of 110° cuts down a man's normal ability about 25 percent. That means that if your body is short 1½ quarts of water and the air around you is 110° F, you are only half a man. You can do only about half as much work as you normally do. You can walk only half as far as you could with plenty of water in normal temperatures.

Most people can get accustomed to working in high temperatures, whether in the stokehold of a ship or in a harvest field on the Kansas prairie. It may take a good man from 2 days to a week before his circulation, his breathing, his heart action, and his sweat glands all get tuned to hot climate work. Some people never do adjust to hot weather; others adjust quickly. Some people even have more sweat glands per square inch of skin surface than others. Extra glands help them acclimatize more quickly. It has been found that those brought up from infancy in hot climates really do have more sweat glands than people raised in temperate climates.

Although your body may acclimatize to hot weather, it must have water to form sweat and supply liquid for circulation. When the body dehydrates, the blood loses more than its share of water. Blood becomes thicker and less in volume. The result is more work for the heart and less efficiency in circulation.

Most people drink the liquid they need at meal times. In hot climates they tend to dehydrate between meals and are restored to normal when they eat and drink. Such people often claim that they are tired when in reality their loss of energy is due to dehydration.

Efficiency loss by dehydration is quickly restored by drinking water. Replacing water lost by sweating will in a few minutes restore a man who has collapsed from de-

hydration. That means you can keep your efficiency in summer desert weather by drinking plenty of water. Without water in hot deserts you will not travel far. The product of your labor will be small.

It is important to remember that there is no permanent harm done to a man who dehydrates even up to 10 percent of his weight. If you weigh 150 pounds, you can sweat off 15 pounds *if* you drink enough water to gain it back later. You probably would not be able to walk to the drinking fountain if you dehydrated that much. If you could stagger over there and drink a quart or two of cool water, you would be back on your feet in a few minutes, ready to battle the champion, as soon as you had replaced all the lost water. Ice cold water, however, may cause stomach distress if drunk too rapidly, but warm or cool water may be swallowed as fast as you like.

There is no evidence that anyone can acclimatize to dehydration. Some men have been dehydrated 15 or 20 times under experimental conditions. *It took just as much water to bring them back to normal efficiency after the last dehydration as it did after the first.* During their dehydration the same symptoms, the same loss of efficiency always occurred at the same stages or percentage of water loss.

Here's how you feel when you dehydrate. First you are thirsty and uncomfortable. Then you start taking it easy, sort of slow motion, and have no appetite. As you lose more water, you get sleepy, your temperature goes up, and by the time you are dehydrated to 5 percent of your body weight, you get sick at your stomach.

From 6 percent to 10 percent dehydration, the symptoms follow in this order:

You experience dizziness, headache, difficulty in breathing, tingling in arms and legs, and a dry mouth; your body gets bluish, your speech is indistinct, and finally you can't walk. . . .

It is probable that man can survive 25 percent dehydration in air temperature of 85° F or cooler. At temperatures up in the nineties and higher, 15 percent dehydration is probably fatal.

The story of Pablo Valencia is a glorious exception. In 1905 Pablo was in the desert of southwestern Arizona for 8 days and nights with 1 day's water. He rode in the saddle for 35 miles and walked or crawled between 100 and 150 miles. For 160 hours he was without water. His arms and legs were cut by thorns and rocks, but his blood was so thick the wounds did not bleed until he was rescued by Dr. McGee and water was gotten into his stomach. He lost 25 percent of his weight. During the incident the lowest temperature was 81° F, the maximum 103.2° F. Pablo Valencia, however, was out in the open, not in the protected shelter of the official thermometer. He was, of course, familiar with the desert trails and dragged himself back to water and help. You can equal Pablo's will to survive. You should outdo him in common sense about water and desert travel.

In summer desert heat, thirst is not a strong enough sensation to indicate the amount of water you need. If you drink only enough to satisfy your thirst, it will still be possible to dehydrate slowly. The best plan is to drink plenty of water any time it is available and particularly at meal times.

There is no substitute for water to prevent dehydration and keep the body at normal efficiency. Alcohol, salt water, gasoline, blood, or urine—any of those liquids which desert and sea castaway romances say men have tried as substitutes for water—*only increase dehydration.*



In summer, the desert hiker is more comfortable if he is fully clothed, including hat or sun helmet; if he does not sit on the ground when resting but kneels or squats under a rock overhang or in other shade; if he drinks plenty of water to replace that lost by perspiration.

That is because all contain waste products which the body must get rid of through the kidneys. More water is required to carry off the waste through the body than is contained in the liquids mentioned. For example, sea water is more salty than urine; therefore, when sea water is drunk, the body must add more water to carry away the extra salt.

You can drink brackish water—that is water with half as much salt as sea water—and get a net gain of moisture for the body. . . .

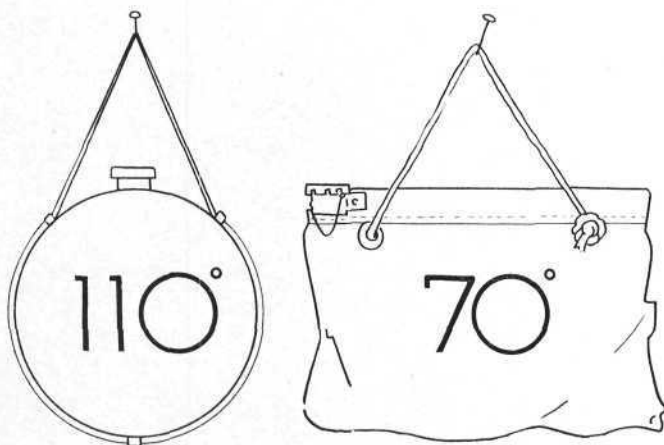
Do not adulterate fresh water! If your fresh water accidentally gets mixed with salt, don't waste it. Drink it and get all the possible good from it.

Chewing gum or pebbles in the mouth may be a pleasant form of kidding yourself that you are not thirsty. They do *no harm* but they are not a substitute for water and will not aid in keeping your body temperature normal. Only water, sweated out and evaporated on your skin surface, can do that job. You may smoke, too, if you like. It will not change your need for water.

SALT IN HOT WEATHER

Recent studies on salt needs of the body indicate that a little extra salt on your food at mealtimes may be necessary for the first few days you are living in hot climates. When you have adjusted to living in the heat, food salted to your taste will supply all your body needs. Unless plenty of water is available, salt will do you definite harm.

Sweat does contain salt, but the body is able to regulate the amount of salt in sweat and so conserve what is needed. In other words, don't worry about your salt but do keep up your water supply.



Just as evaporation keeps the water in the water bag 40 degrees cooler than the same amount contained in a canteen, evaporation of perspiration on the skin keeps man's body temperature normal.

RATION YOUR SWEAT, NOT YOUR WATER

Your body produces so much heat every hour while at rest that unless that heat is lost, you will have 2 degrees of fever in 1 hour. Evaporating sweat takes care of that heat just as fast as it is formed. In order to keep your body temperature normal, every hundred calories of heat generated by your body and absorbed from air, sun, or ground, must be balanced by the evaporation of 173 grams of sweat.

In hot deserts you need about a gallon of water per day. If you follow the rules and walk in the "cool" desert night, you can get about 20 miles for that daily gallon. If you do your walking in daytime heat, you'll be lucky to get 10 miles to the gallon. Whether you sit out your desert survival or walk home you'll need water, at least 3 to 4 quarts a day.

The only way to conserve your water is to ration your sweat. Drink your water as you need it, but keep heat out of your body. That can be done if you keep your shirt on. It had better be a white or light-colored shirt. Of course we mean pants, hat, and shoes as well as shirt. Clothing helps ration your sweat by not letting it evaporate so fast that you get only part of its cooling effect. Light clothing also reflects or turns away the heat of the sun and keeps out the hot desert air. Keep in the shade as much as possible during the day. Desert natives have tents open on all sides to allow free circulation of air during the daytime. Sit up a few inches off the ground, if possible; do not lie on the ground. It is 30 to 45 degrees cooler a foot above the ground than it is right on the ground. That difference can save you a lot of sweat.

Slow motion is better than speed in hot deserts. Slow and steady, slow and easy does it. If you must move about in the heat, you'll last longer on less water if you take it easy. Remember the Arab. He is not surviving in the desert; he just lives there—and he likes it. He isn't lazy, he's just living in slow motion, the way the desert makes him live.

If you have plenty of water—2 or 3 gallons per day—go ahead and work your head off if you want to, and drink as often as you like. In fact you had better drink more and oftener than you think your thirst requires, if you want to stay healthy and keep efficient.

You may *feel* more comfortable in the desert without a shirt or pants. That is because your sweat evaporates

so fast. But it takes more sweat, and sunburn is a painful trouble. Desert sun will burn even if you have a good coat of tan, so use your head, maintain your efficiency, and keep your clothes on. . . .

SUMMARY

Evidence left by those who have died from lack of water indicates that in temperatures over 100° F you may live a couple of days without water. Less than 3 quarts of water will not increase your survival time. If you conserve your energy and keep in the shade to avoid absorbing heat, every gallon of water you have is equal to another day of life. Rationing yourself to 1 or 2 quarts of water per day is actually inviting disaster (at high temperatures), because such small amounts will not prevent your dehydration. Loss of efficiency and resulting collapse follow dehydration as surely as night follows day. Ration your sweat but not your water.

There are no substitutes for water. Pebbles in the mouth, chewing gum, or smoking may make you *feel* better but they will not decrease and will not increase your need for water. Alcohol, salt water, urine, or any liquid containing quantities of waste material which must be eliminated from the body through the kidneys will increase dehydration. Water in your stomach will keep you on your feet in hot summer deserts.

Arabs and Berbers, Mongols and American Indians live and travel in deserts. There are many plants and animals which survive under desert conditions. If you profit by the lessons these desert dwellers have given—if you understand the limitations under which you must walk or wait in the desert—if you practice what we've been preaching, you'll live to know the value of these desert lessons.

The walking is good in deserts. Distances are great, but the obstacles to a man on foot are few. Water is necessary to maintain normal body temperature, and normal temperature is necessary to keep up your efficiency.

In summer desert temperatures you can conserve body water by keeping fully clothed and sitting in the shade during the day. Necessary work or walking should be done at night. Under such conditions in summer a man should be able to travel about 20 miles on a gallon of water. If you work or travel in the heat of daytime deserts, twice or three times as much water is essential to your body.

If you are flying in desert areas, plan to study your maps. Keep in mind the general locations and directions of the trails. Plan now to learn about deserts and desert people. They are interesting. Plan for your water supply if you are in desert areas. Your water needs are great even if you are riding across the desert in a jeep.

It is recorded that one tough general thought troops on desert maneuvers could be toughened to lack of water. A colonel knew better and took the general for a jeep ride with only 2 quarts of water per man. Of course the water lasted the general less than 3 hours. Long before the desert ride was finished, the general was mentally prepared to issue plenty of water to troops on maneuvers. Under hard working conditions in summer daytime desert heat, those troops often used 3 gallons of drinking water per man per day.

The water you drink when exposed to desert heat is not wasted. Carry your water in your stomach—drink as you feel thirsty and keep your efficiency. Men have dehydrated with water still in their canteens—and wondered why they couldn't walk or work! It is the water in your body that saves your life, not the water in your canteen.

If you harm a sea gull in Utah, you may land in jail. Here is the story behind Utahans' sentiment for this bird whose appetite for crickets once saved the Mormon pioneers. . .

Why Utah Loves the Sea Gull

By CHARLES B. LOCKWOOD

ON JULY 24, 1837, the first small band of Mormon pioneers reached the Great Salt Lake Valley of Utah. They were a small advance group—143 men, three women and two children; 73 wagons, 93 horses, 52 mules, 19 cows and a flock of chickens. Their mission was to explore this vast, arid virgin valley and to establish the foundations of the Mormon kingdom to which many more pilgrims of the Church of Latter Day Saints later would migrate.

To feed themselves and the bands to follow, the Saints, as they were called, planted 500 acres of grain and other crops the fall and winter after their arrival. They tended them carefully, knowing that the success of their mission depended upon a good harvest.

By early summer, the plants were green and growing, and the pioneers were elated. Their goal was assured, they told one another. Nothing could halt their advancement now.

But suddenly out of a clear June sky, disaster struck. A huge black cloud of hungry crickets descended upon the grain fields, attacking the young plants and eating heads and stalks down to the ground.

Every able man and woman in the small settlement rushed to the fields, armed with brooms, shovels and torches—anything with which to wage battle with the pests. But their determined efforts seemed in vain. Like a wind-blown prairie fire the cricket hordes swarmed from one plot to the next.

The Saints did not give up easily. Their very lives depended upon these fields of grain. The nearest contact with civilization was more than three months' traveling time away. They burned, swatted and beat at the insects. They swept them into the irrigation ditches in hopes that they would drown. But the crickets merely fluttered their way back to shore, shook their wings and, unharmed, returned to the feast. More and more grain

fell victim, and the crickets continued to advance.

But one strategy had not yet been tried. When their human minds and bodies could not cope with an emergency, the Mormons turned to prayer. While a handful of the weaker-faithed panicked, the stronger Saints prayed to God for deliverance from the cricket plague.

Again the sky was darkened as a second great cloud passed before the sun. While the Saints continued to pray, great flocks of black and white birds circled the sky, soaring overhead by the thousands, then, with an eerie screeching, swooping to earth.

The Mormons viewed their advance with utter despair. These birds would finish what the crickets had started, they feared. The last shred of hope disappeared from many hearts.

But suddenly it became evident that the newcomers were not eating the grain. Shouts of joy arose from the pioneer band as they realized that the crickets, and not their crops, were at-

tracting the large black and white birds. They were gorging themselves with the insects, eating until capacity, then regurgitating their food and returning for more. When at last the beautiful birds again took wing, there wasn't a cricket—or any other bug—left in the valley. The Mormons' prayers had been answered. The Saints were saved!

These large black and white birds were, of course, sea gulls. They had come from their island home, an expansive island in the Great Salt Lake called Bird Island.

To commemorate their fathers' deliverance from the Mormon cricket plague, the Church of Jesus Christ of Latter Day Saints in 1913 erected an impressive monument to the sea gull in Salt Lake City's Temple Square. It is the first monument in the world dedicated to bird life.

The sculpture by Mahroni Young shows two of the birds alighting on the marble pedestal. On the base below, four bas relief panels tell the story repeated here.



*Sea gull monument within Temple Square in Salt Lake City, Utah.
Photo courtesy Salt Lake Chamber of Commerce.*



Photo by W. Ray Scott

Epitaph for a Cowboy

By JEAN CONDER SOULE
Springfield, Pennsylvania

He rode the range with fervor and zest;
For he loved the life of the golden West.
The hills were his home; the plains, his bed.
With prairie grass to pillow his head.
He could break a horse; or ride the herd
With a song on his lips and a friendly word.
He could rope a steer and draw with the best
Of the fighting sons of the rollicking West.
Wherever he is on that faraway range,
I'll wager he hasn't noticed the change!
For he'll gallop along the Golden Street
With silver spurs on his booted feet,
Lassoing runaway angels, and
Marking the strays with God's own brand!

• • •

DESERT NIGHT

By GRACE BARKER WILSON
Kirtland, New Mexico

The bosom of the desert land is bare
And harsh beneath the setting sun's red
glare.
The purple shadows deepen into dark;
From far away I hear a coyote bark.
Then silence comes intense as human tears,
Attunes the soul and exiles all the fears,
And spreads abroad a deep tranquility.
The desert night belongs to God and me.

PATTERNS

By GRACE BARKER WILSON
Kirtland, New Mexico

The desert rims the canyon wall
With beauty from another age,
And spreads a cover over all
Of pungent smelling purple sage.

• • •

GRAY DAYS

By EVA L. ROBINSON
Los Angeles, California

When Nature, mother of us all,
A gray and misty veil lets fall,
Upon the dry and withered breast
The Desert bares while sleeping,
She knows all sunshine is not best;
There should be times of weeping.

We may regret the overcast of skies
And hope it will not last:
But let it rain or sleet or snow,
Or clouds be dark or graying,
Then listen for a cadence low,
You'll hear the Desert praying—

Praying for penetrating showers
To waken hope for springtime flowers.
Though winter to the Desert brings
Some tones of grave inflection,
Her dormant life with folded wings
Awaits a resurrection.

STRANGER BEWARE

By LORNE BAKER
Los Angeles, California

Walk beside me, city stranger,
But I warn you, warn you well—
For my soul has been enchanted;
Listen to the tale I tell!

Oh, I've whirled upon the dust-storm,
And I've danced on burning sands—
Mingled tears of joy with rain-drops
When they fell on thirsty lands.

I have sung and talked with night birds,
When the wind blew fast and cold,
And in spring have slept with poppies
'Neith a coverlet of gold.

I've heard Indian whispers falling,
And their tom-toms, soft and low—
Pioneers and cowboys calling—
Here their spirits roam, I know.

I've seen fingers in the starlight,
Hanging heaven's lantern high,
And a flaming brush at sunset
Painting pictures in the sky!

Stranger, if you walk beside me,
Here your soul will ever be,
For the desert will bewitch you
As its spell has captured me.

Josie Pearl, Prospector on Nevada's Black Rock Desert

Deep in the Black Rock Desert of northwestern Nevada, Josie Pearl lives alone, 96 miles from the nearest town, self-sufficient, and facing the challenge of each new morning with enthusiasm. A desert lady with a desert heart, she has helped sick miners and given needed love to wayward boys. She was at hand when Bob Ford was killed and was a close friend of Ernie Pyle who wrote her, 13 hours before he was killed, "the happiest I will ever be again is the day I stick my feet under your table and eat a pot of those Boston baked beans."

By NELL MURBARGER

Photos by the Author

SPIRALING OUT OF the north, a sinuous dust devil grew as it moved across the desert, gathering more thistles and broken sage, more dust. The dancing column vanished in the heat haze to the south, and the yellow flat slipped back under its briefly-broken hush.

Once again, there was only vastness, rimmed by ragged hills, and marked by the thin tracery of the road.

I was no stranger to this upper left-hand corner of Nevada. I knew the nearest town to the northwest was the one - store - and - postoffice village of Denio, Oregon, 72 miles away; and that to the west, there was no town closer than Cedarville, California, 170 miles.

Between those outposts and Winnemucca to the south, spread 10,000 square miles of sage and solitude, silence and sand — a territory more than one-fourth as large as the entire state of Indiana, but without either postoffice or point of supply.

Somewhere, deep in the heart of that immensity, I hoped to locate a lone woman—a woman who had been described to me as one of the most remarkable characters in the West.

Until two days previously, my acquaintance with Josie Pearl had been limited to three pages in Ernie Pyle's book, *Home Country*,* a collection of his best newspaper columns originally written and published in the 1930's.

"Josie Pearl was a woman of the West," Pyle had written. "Her dress

was calico, with an apron over it; on her head was a farmer's straw hat, on her feet a mismatched pair of men's shoes, and on her left hand and wrist \$6000 worth of diamonds! That was Josie—contradiction all over, and a sort of Tugboat Annie of the desert. Her whole life had been spent . . . hunting for gold in the ground. She was a prospector. She had been at it since she was nine, playing a man's part in a man's game . . ."

I had read the book, and enjoyed it, and eventually had forgotten it.

Several years passed; and then I happened to be spending a night with John and Marge Birnie, at the Old Mill Ranch, near Paradise Valley, Nevada. As we had sat talking that evening, Marge had remarked that I should write a story about Josie Pearl.

"Not that lady miner Ernie Pyle wrote about in *Home Country*?" I exclaimed incredulously. "Don't tell me she's still alive!"

"And going strong!" laughed Marge. "But she's far more than a 'lady miner'! She's a great personality. She's straight out of the pages of the Old West—and she's the last of her kind!"

If I had been told that Kit Carson was waiting for me at the gate, I



Josie Pearl—her dress was of calico, but in her wardrobe a \$7000 mink coat. She lives alone on the Nevada desert many miles from her nearest neighbor.



Enroute to Josie Pearl's home, 96 miles from Winnemucca, Nevada, Author Nell Murbarger took this photograph of the expansive desert.

couldn't have been more astounded. Nearly 15 years had elapsed since Pyle had written his story of this woman; and, even then, he had carried the impression that she was very old. And now, to learn that she was still "going strong" was almost unbelievable.

Although the Birnies knew her well, they could not tell me how to reach her home—a situation I was to find quite prevalent during the next two days, which I spent making inquiries around Winnemucca. Everyone I approached seemed to know her—and favorably — but none could give me explicit directions for finding her.

"I've never been to her place," they would say, uncertainly, "but she lives up near the north end of Black Rock desert . . ." Or, perhaps, they would describe her residence as "somewhere in the vicinity of Summit Lake," or "over beyond the Quinn River Country."

However described, it was vague. But now that my interest was aroused, I was determined at least to make an attempt to locate her.

Because it had seemed the logical approach to any of the geographical points mentioned, I drove north on U.S. 95 to the junction of State Route 8-A, 33 miles beyond Winnemucca. Halting at the turn-off — like a diver hesitating before the plunge — I sat there for several minutes, ranging my eyes over that wide and lonely land spreading ahead; and then, I eased my foot from the brake, and the car and I were rolling down that long, empty road, leading to the west.

In this section of Nevada, human inhabitants are few so the first opportunity I had to check my navigation was at Quinn River Ranch, 38 miles west of the turn-off. Only the ranch cook was in evidence. Like everyone with whom I talked at Winnemucca, the cook knew Josie Pearl, but not where she lived.

"When she goes to town," he said, "she comes up from the south. I'd say take the Leonard Creek road to the next ranch—the Montoya place—and ask there. It's not far," he added. "Maybe 25 miles . . ."

This Leonard Creek Road was a primitive sort, not in the least hazardous, so long as speed was held down, but generally narrow, frequently given to sharp turns, and always dusty. As I dodged sand pockets and shuttled through hedge-like aisles of sagebrush, I thought of Ernie Pyle traveling that same trail all those years before.

"There really wasn't any road to Josie Pearl's cabin," he had written. "Merely a trail across space. Your creeping car was the center of an appalling cloud of dust, and the sage scratched long streaks on the fender."

Leaving Quinn River Ranch, the road skirted the southeasterly base of Pine Forest range, soon heading west across the northern fringe of Black Rock desert.

Stretching to the southwest for more than a hundred miles, this bleak playa — this barren bed of prehistoric Lake Lahontan — is a place of expansive silence. At its widest point, the playa is nearly 15 miles across. Here, at its tip, it was soon left behind, and the

little road went climbing into the rough range beyond.

Another few miles revealed the Montoya ranch — officially, the Pine Range Livestock Company. Here, for the first time, I learned that I was really on the right road, and that Josie's place was only five or six miles back in the hills. Since leaving Winnemucca, 95 miles before, I had been traveling in uncertainty.

At last, I spotted the house in a small clump of poplars, about a hundred yards off the trail.

"Josie Pearl," Pyle had written, "lived all alone in a little tar-paper cabin surrounded by nothing but desert. From a mile away you could hardly see the cabin amidst the knee-high sagebrush. But when you got there it seemed almost like a community—it was such a contrast in a space filled only with white sun and empty distance . . ."

Bringing my dust-layered car to a halt in the yard, I looked about me. Everywhere there were tables and boxes and benches, each one covered with ore samples, rocks, petrified wood, geodes, rusty relics, purple glass, miners' picks, prospectors' pans, parts for cars, and miscellaneous trivia. At one of the tables, a woman was working, her face screened from view beneath the bill of an old-fashioned sun-bonnet.

"Pardon me," I said. "I'm looking for Josie Pearl's place."

"Well," answered the woman, somewhat gruffly, "You've found it! I'm Josie. What's on your mind?"

For the first time since my arrival, she glanced up. I found myself looking into one of the most unforgettable faces I have ever seen. Years were in that face—a great many years—but there was in it some indefinable quality that far overshadowed the casual importance of age. The eyes that bored into mine were neither friendly nor unfriendly. Rather, they were shrewd and appraising; as steady as the eyes of a gunfighter; as non-committal as those of a poker player.

She was not a large woman, but healthy-looking and robust, with determination and self-sufficiency written all over her. I felt instinctively that should she ever decide to move one of the surrounding mountains to the other side of the canyon, she would go about it calmly and deliberately, some evening after supper, perhaps. And she would move it—every stick and stone of it—and would ask no help.

That was my first impression of Josie. It still stands.

She wasn't sure that she wanted her life story written for *Desert Magazine*.

"Not that I don't like *Desert*," she hastened to assure me. I do. Good magazine. Good down-to-earth stuff in it. It's just that I don't go much on publicity . . ."

But persistence and persuasion eventually won the day.

"All right," she agreed at last. "Since you put it that way, I'll give you the story—but don't be surprised if you find some of it a little hard to believe. I'm close to a hundred years old, girlie," she went on, her sharp eyes boring into mine, "and I've had about as strange a life as any person living!"

As we started across the yard toward the cabin, Josie glanced at my car. "You traveling alone?"

I said I was. "Good! Then you'll stay overnight." There was no question mark at the end of that statement.

"Her cabin," again to quote Ernie Pyle's observations, "was the wildest hodge-podge of riches and rubbish I'd ever seen. The walls were thick with pinned-up letters from friends, assay receipts on ore, receipts from Montgomery Ward. Letters and boxes and clothing and pans were just thrown—everywhere. And in the middle of it all sat an expensive wardrobe trunk, with a \$7000 sealskin coat inside . . ."

The pin-ups were all there, just as Ernie had described them—the assay reports and newspaper clippings and letters and picture postcards and tax receipts and cash register slips. During the considerable lapse of time between Ernie's visit and mine, I'm sure that the collection on the walls had grown progressively deeper; and while I didn't see the \$7000 sealskin coat, I'm willing to concede that it was lurking somewhere in the shadows.

"Have a chair," said Josie. "Anywhere you like. Here—this is the best one." With a vigorous sweep of her arm she sent sailing to the floor an accumulation of newspapers and magazines, and motioned me to the cleared seat. "Now," she said, "what is it you want to know?"

The story of Josie's life was presented with as much chronological order as may be expected in a freshly-shuffled pack of cards. It was presented while we were out in her small garden, cutting "loose leaf" lettuce and lamb's-quarter greens for supper, and gathering rhubarb for a pie. It was presented while Josie was rattling the grate and building a roaring fire in the big cookstove, and concocting the rhubarb pie, and grinding meat for hash, and making hot cornbread; while she was out in the chicken yard feeding her assorted fowls and rabbits and gathering eggs, and getting in wood for the night, and filling the lamps and cleaning their chimneys, and shooing



Home for Josie Pearl is this building "surrounded by nothing but desert," as Ernie Pyle once wrote, ". . . almost like a community . . ."

flies away from the door and scolding the dogs.

When Josie was still a small child, her parents had left their Eastern home to settle in New Mexico, where her father became interested in mining. It was an interest that quickly communicated itself to Josie, and at 13 years of age — when most little girls of that hoop-skirted era were still playing with dolls—she had found her first mine, subsequently selling it for \$5000. By the time of the mining boom at Creede, Colorado, Josie was a young woman, and nothing could keep her from joining the stampede.

"Was that ever a time!" she shook her head with the memory. "I guess maybe you've heard Cy Warman's poem:

*"The cliffs are solid silver,
With won'drous wealth untold,
And the beds of the running rivers
Are lined with the purest gold.
While the world is filled with sorrow,
And hearts must break and bleed—
It's day all day in the daytime,
And there is no night in Creede!"*

"That's the way it was—everything roaring, night and day. Gambling, shootings, knifings. I got a job as a waitress. Bob Ford and Soapy Smith always ate at one of my tables. Every Sunday morning each of them would leave a five dollar gold piece under his coffee cup for me. Fine fellows, both of them. I never could understand how Bob could have shot Jesse James like he did . . ."

I asked if she was in Creede when Ford was murdered.

"Indeed, I was!" said Josie. "I was waiting table when I heard the shooting and folks began yelling. I ran outside to see what was happening . . . and there lay Bob, all bloody and still. Yes," she nodded, "I was there . . ."

In 1892, Josie became the wife of Lane Pearl, a young mining engineer and Stanford graduate. For a while she operated a boarding house, patronized largely by men from the Chance, Del Monte, Amethyst and Bachelor mines, of Creede vicinity. Later, she and her husband moved to California; then to Reno, where she worked for a time at Whittaker hospital. And then came the strike at Goldfield.

"We were among the first ones there," she recalled. "I got a job waiting table at the Palm restaurant, owned by a Mr. French, from Alaska. He paid me four dollars a day, plus two meals, and my tips. There was no end of gold in circulation, and all the men tipped as if it were burning holes in their pockets.

"Mr. French had a rule against hiring married women, so I had taken the job under my maiden name. Lane would come in and sit down at one of my tables and eat, but we never let on that we were husband and wife. One day, Mr. French said, 'You know, Josie, I think that young mining engineer who eats in here all the time, is sort of sweet on you.' They never caught on."

With Goldfield beginning to languish, Lane Pearl was called to take charge of one of the leading mines at Ward, Nevada, a present day ghost town, a few miles south of Ely. He was still employed there when the influenza epidemic swept the country in 1918. Not even the most remote mining camps were spared, and in November of that year, Lane succumbed to the dread malady. He left his wife of 26 years, by then a woman approaching middle age, and at loose ends.

Even the loss of her idolized husband could not dull her love for the rocky soil of Nevada, and its mining towns. Restlessly she began drifting from camp to camp, operating miners' boarding houses from one end of the state to the other.

"At Betty O'Neil, a camp southeast of Battle Mountain, I made \$35,000 in three years, running a boarding house . . . and then turned around and sunk the whole thing into a mine, and lost it. More than once I've been worth \$100,000 one day . . . and the next day would be cooking in some mining camp at \$30 a month! But I always managed to keep my credit good. Right today," she declared, "I could walk into any bank in this part of the state and borrow \$5000 on five minutes' notice!"

The older she got, the more mining became an obsession. Eventually she had gravitated toward northern Humboldt county, had acquired some claims there in the hills, and had been working them since.

"Of course," said Josie, "I still do a bit of prospecting, now and then. Just knock off work at the mine, jump in my old pick-up, and strike out to see what I can find. Last week I was up in Idaho, looking at a uranium prospect. Scads of money in some of this new stuff . . . Scads of money!"

At Winnemucca I had been told that Josie had nursed half the sick miners in northern Nevada, and had spent thousands of dollars grubstaking down - at - the - heels prospectors who were eating their hearts out for one last fling at the canyons. When I referred to this phase of her activities, she brushed it aside impatiently.

"My real hobby," she declared, brightening, "is boys—homeless boys. Lord only knows how many I've taken in and fed and clothed and given educations. Lots of 'em were rough little badgers when I got them. Penitentiary fodder. What they needed most was love and understanding and to know that someone was interested in what they did. I'm proud to say every boy I've helped has turned into a fine man—not one of them has gone wrong. I

receive letters from them all over the world. Most of them have good jobs; some are fighting with the armed forces; some are married and have families."

The dream of her life, she confided, is to make enough money to build and endow a home for boys.

"Something like Father Flanagan's Boys' Town," she said. "That's all I'm working for, now."

When I asked how she had happened to meet Ernie Pyle, she explained that she had gone to Albuquerque to visit her sister, who lived near the Pyles and had been nursing Mrs. Pyle through an illness.

"Naturally I met them both, and Ernie and I started to talk about the West, and about Nevada, and mining, and I told him that if his travels ever brought him to Winnemucca, I wanted him to come and see me. He said he would—and he did—several times.

"We corresponded back and forth all the rest of his life. In the last letter he wrote me, he said 'The happiest I will ever be again is the day I stick my feet under your table and eat a pot of those Boston baked beans!'

"Thirteen hours later," said Josie quietly, "he was killed . . ."

Dark clouds had been bunching over the bare hills to the northwest, and even before we finished with supper, a stormy gale was sweeping across the yard and the air had turned bitterly cold. With the dishes washed, the assorted livestock fed and sheltered and the lamp lighted, we drew our chairs close to the glowing cook stove and there we talked far into the night.

Josie seemed to draw upon an inexhaustible fountain of experiences. She told of loneliness; of what it meant to be the only woman in mining camps numbering hundreds of men. She told of packing grub on her back through 20-below-zero blizzards, of wading snow and sharpening drill steel, and loading shots; of defending her successive mines against highgraders and claim jumpers and faithless partners.

"More than once," she said, "I've spent a long cold night in a mine tunnel with a .30-30 rifle across my knees . . ."

And there had been lawsuits. Lawsuits without end.

"She said gold brought you nothing but trouble and yet you couldn't stop looking for it," Ernie Pyle had written. "The minute you had gold, somebody started cheating you, or suing you, or cutting your throat. She couldn't even count the lawsuits she had been in. She had lost \$15,000 and \$60,000 and \$8000 and \$10,000, and I don't know how much more. 'But what's \$8000?' she said. 'Why

\$8000 doesn't amount to a hill of beans. What's \$8000?' Scornfully."

How well, how very well, he had known her.

Late that night, long after Josie and I had retired and the fire in the cook stove had died to gray embers, I lay wakefully in the darkness, listening to the wind as it beat at the windows and doors and whistled down the stove pipe and clutched at a piece of loose canvas and flung gravel against the side of the cabin. Now and then a jagged flash of lightning split the dark sky and distant thunder rolled and rumbled through the ranges.

Some time, on the day to follow, I would return to Winnemucca—to electric lights and sidewalks and dime stores and super markets—and Josie Pearl would be left alone to face the recurring storms of this high, lonely land. She would be left alone to cope with possible illness and accident, with primitive roads, and miring mud, and snowdrifts, and summer's withering heat and drouth and failing springs; and, most particularly, with the problem of daily needs that forever roost on the doorsteps of those who live a hundred miles from the nearest town.

It was impossible to imagine a stranger sort of existence for a woman—particularly a woman of advanced years; yet, I had that day seen enough of Josie to know that as long as she lived and retained her health, she would face the challenge of each new morning with hope and courage and a wonderful enthusiasm for whatever that day might yield.

"She's straight out of the pages of the Old West . . . and the last of her kind," Marge Birnie had said.

I was beginning to understand what she had meant.

ANSWERS TO QUIZ

Questions are on page 8

- 1—Iron pyrites.
- 2—Overland stage operation.
- 3—Salt beds in the bottom of the sea.
- 4—Fossils.
- 5—Craft for crossing water.
- 6—A California-bound gold-seeker.
- 7—Bisnaga.
- 8—Nickel.
- 9—Utah.
- 10—Wickenburg.
- 11—Colorado River.
- 12—Coronado.
- 13—Raton, in New Mexico.
- 14—Virginia City.
- 15—Lieut. Beale.
- 16—Bird.
- 17—Monument Valley.
- 18—Utah.
- 19—Painter of the desert landscape.
- 20—On the California-Nevada border.

Here and There on the Desert...

ARIZONA

Parks' Roads Due for Repair . . .

WASHINGTON—Repair and construction of roads and trails in four national parks in the desert area of the West are included in the 1954 federal parks program, Secretary of the Interior Douglas McKay indicated. The cost will be \$652,300. Work was planned at Grand Canyon, Arizona, \$262,500, grading and surfacing south approach road; Coronado National Monument, Arizona, \$192,000, entrance road; Wupatki National Monument, Arizona, \$192,000, entrance road; Wupatki National Monument, Arizona, \$192,000, Betterman Wupatki-Sunset road and Arches National Monument, Utah, \$5,800, trails. —*Yuma Daily Sun*

File Suit Against U.S. . . .

PHOENIX — In a suit filed in Phoenix, the Mojave and Chemehevi Indians have asked that the federal government be enjoined from allocating any more of the rich lands of the Colorado River Reservation to other Indians. The Chemehevis and Mojaves claim the entire 264,000 acre reservation, which was established in 1865, as their own. With construction of Parker Dam about 100,000 acres increased in value as rich irrigable land. The tribes are also asking the court to void a 1945 reservation ordinance which opened the reservation to other Indians and under which 150 families from other tribes have been settled on some 70,000 acres. They maintain the ordinance was made under "application of government pressure and misrepresentation" and that the ordinance was repealed later by referendum vote which they claim the Bureau of Indian Affairs refuses to recognize.—*Phoenix Gazette*

Have Few Heart Ills . . .

FORT DEFIANCE — Coronary heart disease, a leading cause of death in the U.S., hardly ever strikes Navajo Indians. That is the observation of Dr. Jarvey Gilbert, Ft. Defiance Navajo Health Center physician. Speaking to the California Heart association recently he said that some unknown factor, probably hereditary, is responsible for a phenomenally few cases of the disease contracted by the Navajos. Only five cases of coronary heart ailment were detected in 10,000 admissions to the health center from 1949 to 1952. Not a single case was discovered in 60,000 out-patient visits.—*Mojave Desert News*

Bid on Indian Land . . .

WINDOW ROCK — High bids of \$1,616,319.68 have been made on Navajo oil and gas lands scattered throughout New Mexico, Arizona and Utah, the Indian Bureau has announced. Highest price per acre was offered by Shell Oil Company of Los Angeles, \$91.11 per acre for a 2,560-acre tract in San Juan County, New Mexico. All leases carry 12.5 percent royalty to the tribe or individual Indian and annual rentals of \$1.25 an acre in advance, and are renewable in 10 years.—*Aztec Independent-Review*

Cancel Liquor Sales . . .

FLAGSTAFF—After voting to sell liquor to Indians against a state law which fails to provide a penalty for violation, liquor dealers in Flagstaff subsequently agreed to observe the law while waiting a public ballot on the question in the November election. The city council made strong plea for observance of the law after the initial decision was made. The U.S. Congress has adopted legislation which will repeal federal prohibition on sale of liquor to Indians upon cancelling of the state ban. Arizona's constitution forbids the sale of intoxicating liquors to Indians. Arizona people will vote on removing the ban this fall.—*Cocconino Sun*

Peyote Used by Navajos . . .

WINDOW ROCK — The Navajo Tribal Council has been advised that an estimated 12,000 to 14,000 Navajos, about one-sixth of the tribe, are users of peyote, a stimulant derived from buttons of mescal. It is mildly intoxicating. Drs. David Aberly and Maurice Seevers of the University of Michigan, gave the report at a hearing of the Tribal Council as it started investigation into the use, sale and effects of peyote on the reservation. The two said the drug is not habit forming and that it is used almost exclusively as a major adjunct of a religion. Peyote is also used by Mexican Indians as a mild intoxicant in several ceremonies. The council voted to extend the investigation to its next scheduled meeting in the fall.—*New Mexican*

30,000 Visit Jerome Museum . . .

JEROME—With tourist traffic increasing steadily, the 30,000th visitor toured the Jerome, Arizona, Mine Museum recently. It was opened June 20, 1953, by the Jerome Historical Society which owns the museum building, an old fashioned saloon.—*Verde Independent*

Hard Rock Shorty

of DEATH VALLEY



A cold blast was blowing down from the snow-capped Panamints, and Hard Rock Shorty, occupying the rickety bench under the lean-to porch of the Inferno store, edged his seat over to the east end of the porch so he could get the full benefit of the morning sun.

Hard Rock was in a talkative mood this morning. He had just gotten a check for the last carload of ore from his silver mine up Eight Ball creek—and the dudes loitering on the porch were glad to listen.

"Tell us some more about Pisgah Bill's pet rattlesnake," one of them asked.

"That wuz a good snake," Shorty replied. "Saved Bill's life once."

"In winter up at the mine Bill kept the reptile in his cabin. Most o' the time it was coiled up on the rug in front o' the stove, an' the only time it would uncoil wuz when Bill rang the ol' cowbell hangin' outside on a mesquite tree. That bell wuz to tell the men workin' in the mine tunnel when it wuz time fer chow. When the boiled jerky an' beans wuz ready Bill'd give that bell a few jingles an them miners'd come trooping out o' the hole. The snake always got the leavin's an' it grew fat on jerky that wuz too tough fer them miners to chew."

"One day Bill had a bad accident. He wuz up patchin' the roof an' lost his footin' fell through the hole an' landed on the stove. Knocked the stove over and Bill unconscious. Them live ashes set fire to the cabin, and there wuz Bill layin' on the floor dead to the world."

"Ol' Buzz—that's what Bill called his pet snake—saw what wuz goin' on and slithered out the door and climbed the mesquite tree an' started ringin' that bell. The miners got there jest in time to pull Bill outside and put out the fire."

THE DESERT TRADING POST

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CALIFORNIA

Search for Meteorite . . .

DEATH VALLEY—Astronomers and geologists of the University of Southern California were to join forces this summer in search of a meteorite believed to have fallen in Death Valley May 15. An eyewitness, Mrs. George Palmer Putnam, owner of Stove Pipe Wells Hotel, said it flashed over or crashed to the earth at 11:30 p.m. It is believed to have landed somewhere in the Cottonwood Mountains on the west side of Death Valley, based on the observation of A. C. Babb who was driving west across the valley when he saw it. At the same time Babb witnessed the meteor, a fireball, rivaling the moon in brilliance, was observed at the Lick Observatory passing overhead to the east. It was believed to have started brush fires that burned for about an hour somewhere 15 miles east of the observatory. Two aerial reconnaissances of the area failed to reveal any clues. Headquarters for the summer search was to be Stove Pipe Wells.—*The Altadenan*

Asks Sea Park Bids . . .

MECCA—Bids were being sought in mid-June for the second phase of construction on the Salton Sea Park 11 miles east of Mecca on the north shore of the sea. Work was to include 4000 square feet of buildings and other structures. Included in the plans were an employee's residence, utility building, contact station, comfort station, outdoor shower, about 50 ramadas and miscellaneous structures.—*Indio News*

Plan '49ers Encampment . . .

DEATH VALLEY—As initial plans for the sixth annual Death Valley '49er Encampment were made, Dr. Paul Gruendyke, superintendent of parks and recreation in Los Angeles County, was named production chairman. The encampment will be held November 11, 12, 13, and 14. Two booklets are being planned by the '49ers according to George W. Savage, president. Dr. Thomas Clements, geology professor at the University of Southern California, will write on the geological history of the desert area and Ardis Walker, descendent of a pioneer California family, will give an account of William Manly's historic expedition through the valley in 1849. An original map showing Manly's route, found last year, will be included in the book. During the ceremonies on the second day of the encampment, November 12, a bronze plaque, created by Mrs. Cyria Henderson, will be erected over Death Valley Scotty's grave.—*Inyo Register*

Hesperia Industry Seen . . .

VICTORVILLE—Industrial development will play the major part in the restoration of historically prominent Hesperia, Roy Herrod, official in the Hesperia Land and Development Company, recently told the Victor Valley Chamber of Commerce. Listing preliminary plans for the 22,000 acre Hesperia area, Herrod said 1000 acres have been reserved for industry, about 600 for one-acre tracts and about 400 for one to three-acre units. Besides the \$1,200,000 for initial purchase of the area, \$8,000,000 is reserved for its development, said Herrod. Plans include a golf course, with a series of small ponds, and restoration of the famous 36-room Hesperia Hotel. Water for the development, Herrod said, will come from deep wells. In the late 19th century, several unsuccessful attempts were made to develop Hesperia into an agricultural district.—*Victor Press*

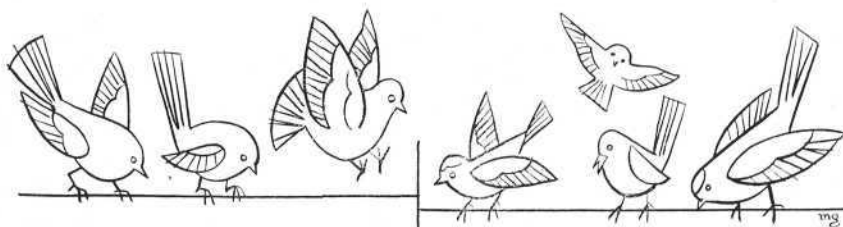
Farm Land Opened . . .

WASHINGTON—Twenty farm units, comprising 1369 acres of irrigable Coachella Valley land in Southern California, will be opened to homestead entry by war veterans. Located near Indio, the farms, ranging from 39 to 108 acres in size, are irrigated by Colorado River water diverted at Imperial Dam 18 miles northeast of Yuma, Arizona, and carried through

the main All-American Canal and its 123 mile Coachella branch. According to E. G. Nielsen, director of the Bureau of Reclamation's Region Three, a simultaneous three-month filing period for veterans of World Wars I and II, the Spanish-American War and the Philippine Insurrection will conclude on September 3. An examining board will review the qualifications of applicants according to the priority established in the drawing and will offer to qualified applicants a farm unit in the order of the priority. — *Las Vegas Review-Journal*

Colorado River Dam Okayed . . .

WASHINGTON—A House interior subcommittee recently passed a bill to authorize construction of a \$5,040,000 dam across the Colorado River to divert water for the Palo Verde, California, Irrigation District. Witnesses testified the district's present facilities are inadequate because of changes in the river level caused by Hoover and other dams. Cost of the project, except for \$675,000 required from the water district, will be paid from power revenues from Hoover, Parker and other dams. The bill was amended to eliminate authorization for work in an Indian reservation on the opposite side of the river. — *Las Vegas Review-Journal*



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Sets Salton Sea Record . . .

MECCA—Roy Sutter, 38, set a new Salton Sea swimming record May 30, crossing from the eastern side to Helen Burns' Salton Sea Beach resort in seven hours and 48 minutes. In his second attempt Sutter clipped nearly four hours from the record set by Ray Carmassi in April. Sutter, who was told he would never walk again after his left thigh was blasted by an exploding shell in World War Two, holds several long distance records. "The Salton Sea swim is the toughest I've ever made," Sutter said, "it is heavy water loaded with minerals that make it slow going." In his first attempt May 9, Sutter was driven back by high winds when only about an hour away from shore.—*Coachella Valley Sun*



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NEVADA

Antelope Doing Well . . .

FALLON — Sixty-one antelope planted experimentally in the Smith creek area east of Fallon have dispersed themselves widely and are doing well, reports State Warden Ed Scoville. Planted last winter, only two have died, an unusually low loss percentage. Recently the animals have been observed at Railroad pass near the Reese River cutoff, at Chalk mountain near Frenchman's Station and at Sand Springs Summit. About half females, they were expected to have young this spring.—*Fallon Standard*

Gain New Water Supply . . .

LAS VEGAS—The Las Vegas Valley Water District has initiated action to bring Lake Mead water into the Las Vegas area by next summer. According to Thomas Campbell, president of the district board, sale of \$8,593,157 of water bonds has been made and an escrow has been set up for purchase of the Las Vegas Land and Water Company distribution system. Campbell said it appeared the district would pay about \$2,800,000 for the facilities. Purchase of the company will be the first step in securing Lake Mead water for the area. — *Las Vegas Review-Journal*

More Nevada A-Tests . . .

LAS VEGAS — Southern Nye county, Nevada will be the scene of atomic tests again next spring. According to the Atomic Energy Commission, the Public Health Service has been advised to reactivate 200 health officers for a brief tour of duty for monitoring purposes. Off-site radiological monitoring will extend for 300 miles around the proving grounds at Frenchman and Yucca flats. — *Las Vegas Review-Journal*

Plan State Park System . . .

ELY—Initiating study for creation of a state-wide park system, all Nevada Chambers of Commerce have been asked for recommendations for sites. Spearheading the project are Darwin Lambert, Ely, president of the Nevada Chamber of Commerce Executives association and officials of the Nevada State Park commission and others. Details of the proposed park

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system have not been formulated. It is part of a Chamber of Commerce program to increase and stabilize Nevada's tourist business, already the largest source of income in the state. Two factors were asked to be considered in judging possible park sites: (1) suitability for outdoor recreation and (2) historic or natural features of importance in need of protection.—*Las Vegas Review-Journal*

5,000,000 Visit Dam . . .

BOULDER CITY — The five million visitor to Hoover Dam was recorded on April 2 when Mrs. Victory Henry, Santa Rosa, California, signed in and enjoyed the conducted tour. Averaging 1107 people daily, 33,209 people toured Hoover Dam during the month, bringing the overall total to 5,032,569 since the tours started January 1, 1937. Figures released by the Hoover Dam project offices indicate daily average for the 4963 days the dam has been open is 1013. — *Las Vegas Review-Journal*

NEW MEXICO

Must Protect Water . . .

SANTA FE—"We are so dependent on water that every effort must be made to protect, preserve and increase its use." That was the declaration of New Mexico State Engineer John Erickson in a recent address to the New Mexico Press association. He added that an "astonishing and alarming decrease" has taken place in the New Mexico acreage which is irrigated by surface water, a total of 32,100 acres from 1939 to 1949. Large decreases occurred in Bernalillo, Colfax, Mora, Rio Arriba, Sandoval, San Miguel, Santa Fe, Taos and Valencia counties. The West is so dependent on its limited water supply high priorities should be given to protecting and developing it, he concluded. — *New Mexican*

Halogeton Poses Threat . . .

SPRINGER — Halogeton, poisonous weed which covers extensive range areas in several western states, should be viewed with seriousness but not as a catastrophe, advise weed control specialists. Since its discovery at Wells, Nevada, in 1935 it has invaded six western states, California, Idaho, Montana, Nevada, Utah and Wyoming. It is now believed to infest 4,750,000 acres of grazing land. Through extensive research chemical compounds have been created that are effective in control of halogeton. Specialists point out that while there has been some livestock loss because of the weed, much of the reason is mismanagement or other causes.—*Springer Tribune*

New Navajo Schools . . .

WASHINGTON—With awarding of \$1,647,791 in contracts for nine school projects on the reservation, the first step in a \$5,600,000 Navajo Indian education program was taken recently. Secretary of Interior McKay noted that the new units will handle 2150 children in New Mexico and Arizona of the 14,000 school age children on the reservation not now attending school. — *New Mexican*

Fort Union Bill Passes . . .

WASHINGTON—A bill to authorize establishment of old Fort Union in New Mexico as a national monument was sent to the president following its approval by the senate. With the president's signature the bill would enable the National Park Service to accept the donation of the 1000-acre site near Las Vegas, New Mexico, and the ruins of the many buildings from the cattle company which owns the land. The fort, built in 1851, was one of the principal military outposts on the Santa Fe Trail. — *New Mexican*

Engineers Okay Project . . .

WASHINGTON — Army engineers have approved an estimated \$6,000,-000 flood control project for the Pecos River, New Mexico, Congressman John J. Dempsey reports. The project would include the Los Esteros Dam and reservoir about seven miles north of Santa Rosa, constructed with capacity of 587,000 acre feet of water, and raising of the Alamogordo Reservoir embankment by 10.5 feet. According to the engineers this plan would provide adequate capacity for sedimentation and water control adequate for lower reaches of the river. It should not adversely affect irrigation projects and should make more water available to them. — *Eddy County News*

Deer Wise to Buzzer . . .

SANTA FE—A rattlesnake-sounding buzzer designed to frighten deer, holds little terror for New Mexico animals. Attached to a fence, its ominous noise is supposed to send deer leaping away from the fence. District Warden Jewel Butler and Biologist Laddie Gordon of the New Mexico Game Department, were standing watch late at night near a protected fence. Several deer congregated at the fence, examined the situation and ignored the buzzer. — *New Mexican*

UTAH

Utes Ask New Program . . .

OURAY—In 1951 when the courts awarded over \$30,000,000 to the Ute Indians of the Ouray-Uintah reservations, the tribesmen voted to pay a cash dividend of \$1000 to each of their

members, and put the remainder in their tribal fund for general improvement purposes. According to John Boyden, Salt Lake attorney for the tribe, the program has not worked out too well, partly due to the fault of white men. Too much of the money has gone for automobiles, it was stated. Recently representatives of the tribal council appeared before a joint committee of the House and Senate in Washington with a new 7-year program for the handling of the tribal funds. Doubt was expressed that the Indians would be ready for full citizenship before the end of that period. — *Vernal Express*

Mormon Cricket Control . . .

BLANDING—With baiting of 39,-300 acres of range land complete, Mormon Cricket control measures in Utah have concluded for 1954, according to Dr. G. F. Knowlton, state leader in grasshopper control. The baiting with a large B-18 baiting plane eliminated an outbreak west of Blanding, San Juan County. Smaller baiting projects were previously accomplished in Tooele, Juab, Sanpete and Piute counties with smaller planes, under direction of H. F. Thornly and William H. Chinn, USDA entomologists. — *San Juan Record*

Return with Gift . . .

SPRINGFIELD, ILLINOIS — Descendants of people driven from Illinois over a hundred years ago were to return to the state in June with a gift. Mormons from Utah were to present Illinois with a statue of Lincoln with an inscription on the base that appropriately reads: "With malice toward none." Created by Avard Fairbanks, dean of fine arts, University of Utah, it was to be unveiled at New Salem State Park, a reconstructed log-cabin village where Lincoln spent six of his early years. National Society of Sons of Utah Pioneers was to make the presentation.

Plant Chukar Partridges . . .

SPRINGVILLE — In the breeding and nesting stage, 2400 brooding-stock Chukar partridges were to be released in mid-June in 14 Utah areas from the Springville and Price game bird

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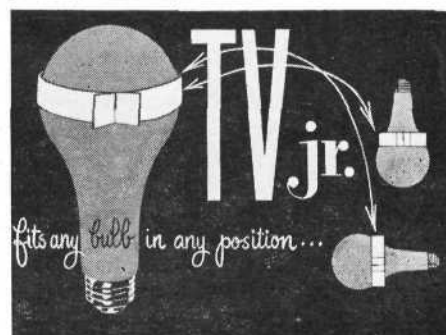
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Blanding, Utah

farms. Supplementing previous plantings, the adult Chukars were expected to nest in the wild this summer. Over 150 were to be planted at each site. — *San Juan Record*

Plan Field Study . . .

CEDAR CITY—An extensive field study of Southern Utah anthropology was to be started in late June by Dr. Clement W. Meighan, department of anthropology sociology chairman at the University of California at Los Angeles. He was to be assisted by 15 students. Dr. Meighan said that southern Utah is rich in possibilities and because no anthropological study has been conducted there in the past 25 years many fields may be opened. He and Keith Dixon, UCLA faculty member, visited the area in April to select sites for excavation. — *Iron County Record*



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MINES and MINING

Fallon, Nevada . . .

With 500 tons or more slated to be shipped daily, mining of perlite ore from deposits 18 miles south of Fallon, Nevada, is expected to begin soon. A. E. Hepburn, president of Nevada Perlite Company, Inc., reports that shipment will continue until a processing plant, for which plans are now complete, is constructed three miles west of Fallon. The perlite property was purchased by Nevada Perlite from William Stuart of Reno. Several million tons of superior quality perlite are reported available.—*Pioche Record*

Ely, Nevada . . .

First oil from a productive well in the Great Basin is expected to start flowing soon at 200 barrels a day from Shell Oil Company's Eagle Springs discovery near Ely. Explorative drilling to 10,358 feet was recently completed and the well was to be plugged back to about 6500 feet, the bottom of the oil bearing strata. Grading at the well has been completed and pumps and two 2000-gallon storage tanks were to be installed. Oil will be transported to Salt Lake City refineries.—*Pioche Record*

Grants, New Mexico . . .

Construction was to begin soon on an addition to the uranium ore-processing plant in which sandstone gangue ores will be treated by an acid leaching process at Grants, New Mexico. The construction follows formulation of an agreement between the Atomic Energy Commission and Anaconda Copper Mining Company. Discovery of large quantities of uranium-bearing sandstone gangue ores in the Morrison formation in the area prompted the expansion, according to Sheldon P. Wimpfen, AEC official. The contract with Anaconda provides for expansion of existing facilities besides the addition.—*Grants Beacon*

Ely, Nevada . . .

Though the search for oil in Nevada hasn't produced any promising discoveries since Shell Oil Company's strike announced Feb. 17, 1954, exploration crews are continuing efforts in belief Nevada may yet become a significant oil producer. Six weeks after the Shell discovery, nearly 6000 leases were granted covering 4,175,578 acres of government land. Shell Oil Company has more than 100,000 acres leased in the vicinity of its Ely discovery. —*Territorial Enterprise*

Moab, Utah . . .

Threatening a battle over uranium rights, four Salt Lake City business men have filed for potash prospecting permits on more than one million acres of land in Southeastern Utah's uranium-rich San Juan and Grand counties. Theory behind the filings, on land already covered with uranium claims, is the belief that no valid mining location can be made for uranium itself. Because the Atomic Energy Act of 1946 reserves all uranium to the federal government, the group maintains that possession rights can be obtained only through prospecting for another mineral. Disclaiming the action was an attempt to jump any claims, a spokesman, N. G. Morgan, Jr., said the filings would do much to "clarify title" to minerals there. —*The New Mexican*

Washington, D. C. . . .

Relaxation of rules on acquisition and disposal of gold has been proposed by the U. S. Treasury Department with the observation that the gold free market price has dropped so near the official U. S. price of \$35 an ounce there is little incentive for smuggling or illegal use of it. Under the proposal processors could hold 50 ounces instead of 35, gold users would not be required to file as many reports and coin collectors' rights in collecting gold coins would be clarified.—*Pioche Record*

Tonopah, Nevada . . .

Negotiations are complete for processing of 2.8 million tons of tailings from the old Tonopah Mining Company and Tonopah Belmont Company's workings about 15 miles northwest of Tonopah. Local and midwest interests, known as Millers, Inc., purchased the tailings, along with 1200 acres of land on which they lie and water wells from Technical Operators. The corporation plans construction and operation of two plants, a 500-ton unit for tailings and a 10-ton unit for raw ore from the Florence and other mines, which the group has either purchased or is now acquiring. Charles H. Chandler, secretary-treasurer of the corporation, said the tailings are expected to yield \$2.25 a ton in gold and silver and between \$4.00 and \$5.00 a ton in tungsten. Discovery of tungsten in the tailings suggests some of the camp's famous old producers, particularly those with extensive reserves of low grade gold-silver ore, may be reactivated.—*Times-Bonanza*

Washington D. C. . . .

Aiding the West's mining industry, Nevada Senator George Malone's plan to grant a 23 percent depletion allowance for 27 strategic and critical minerals has been approved by a senate finance committee. Under original terms of the bill prior to Senator Malone's amendment, the allowable percentage of depletion was only 15 percent. Minerals included are antimony, asbestos, bauxite, beryllium, bismuth, cadmium, celestite, cobalt, columbium and tantalum, corundum, fluorspar, graphite, kyanite, manganese ore, mercury, mica, nickel, platinum and platinum group metals, quartz crystal, tin, tungsten, vanadium, thorium, block statite talc, ilmenite and rutile, zircon and chromite.—*Inyo Independent*

Coaldale, Nevada . . .

Purchase of 160 acres of patented land near Coaldale for exploration of a known uranium deposit was made recently by Young and Critchlow Geophysical Service, Portland, Oregon. The land covers an area where a U. S. Geological Survey team discovered and reported "a uranium-bearing rhyolite tuff deposit." Described in the survey report as "a small deposit of uranium-bearing rhyolite tuff exposed at the northern end of the Silver Peak mountains," several samples collected from weathered outcrops are reported to have assayed from 0.002 to 1.86. —*Goldfield News*

Trona, California . . .

Revival of Southern California gold mining, halted in 1942 by war materials priorities, was indicated recently. Russell M. Donnelly announced that the Argus Development Company has been formed to operate the Ruth group of 25 claims in the Argus Range, about 10 miles from Trona. Donnelly, who heads the Argus group of Los Angeles investors, said resumption of work on the claims will be on an operating agreement under which the Argus group plans to eventually acquire title to the properties.—*Mining Record*

Gleeson, Arizona . . .

Exploration of the old Shannon mine at Gleeson, Arizona, is under way by Shannon Mine Company, a subsidiary of Illinois Zinc Co., and re-opening of it is expected. Mine officials expect to hire between 20 and 30 men by the time it is reactivated but added that the extent of the operation will depend on the metal market. Closed for many years, the mine hit its peak during World War I. The ore will be processed at the Deming New Mexico reduction mill.—*Tombstone Epitaph*

GEMS and MINERALS

WICHITA SOCIETY NAMES OFFICERS FOR NEW YEAR

The Wichita Gem and Mineral Society elected Mrs. Walter J. Broderson president at its annual election meeting recently. She follows Robert L. Phelps into office.

Other officers elected were Cecil Morrison, vice-president; Miss Nora Lee Dennett, secretary; Philip C. Fish, treasurer; Mrs. Marie Gilbert, historian; Miss Neva Lovell, librarian; Walter J. Broderson, Brace Helfrich and Stephen B. Lee, directors.

John Gholson is program chairman; Franklin Lipshultz, Jr., field trips; Mrs. Rex Hile, membership and fellowship and Keith Strait, finance.

EVANS NAMED PRESIDENT L.A. LAPIDARY SOCIETY

New elected officers of the Los Angeles Lapidary Society are Howard Evans, president; Charles Cook, first vice-president; Robert Atwood, second vice president; Jack Deurmeyer, treasurer; Margaret Seeley, recording secretary; Maxine Reams, corresponding secretary. After election of officers, Mrs. Jessie Chittenden talked on jewelry design. Regular meetings of the Los Angeles Lapidary Society are the first Monday of each month at 8 p.m. at the Van Ness Playground auditorium, 5720 Second Avenue, Los Angeles.

SOUTHWEST MINERALOGISTS NAME '53-'54 OFFICERS

Gordon Bailey was recently elected president of the Southwest Mineralogists, Inc. for 1954-55 replacing Herman Hodges. Other new officers include Jack Lasley, vice-president; Gertrude Saling, recording secretary; Helen Gustafson, corresponding secretary; Cora Standridge, treasurer and Herbert, Collins, Gilbert Arnold and George Masimer, directors. Especially honored for many years as "a devoted worker towards the fulfillment of our objectives" was Mrs. Dorothy Craig who was presented an engraved honorary membership card.

GEM, MINERAL FAIR SET IN EUREKA OCTOBER 2-3

Humboldt Gem and Mineral Society, Eureka, California, will sponsor their first annual Gem and Mineral Fair Oct. 2 and 3 in the Carson Memorial building on Harris and J. streets.

Saturday the fair will be underway from 10 a.m. to 10 p.m. and Sunday from 10 a.m. to 6 p.m.

Features will be displays of the Death Valley onyx dinnerware set, lapidary, mineral and silverwork, fluorescent materials and Indian artifacts. Included on the agenda are grab bags, raffles, demonstrations and prizes.

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SAN DIEGO SHOW PLANNED FOR SEPTEMBER 18 AND 19

Annual Gem Show of the San Diego Lapidary Society will be held September 18 and 19 at Turner's Hall, San Diego, California.

Mr. Parsons, assisted by Ed Bohe and Ed Soukup, will test gem stones with Parsons' gemological equipment at the show, free of charge.

ESCONDIDO ENTHUSIASTS FORM GEM, MINERAL CLUB

Escondido, California rockhounds recently organized the Palomar Gem and Mineral Club and immediately scheduled field trips to the mountain and desert areas near San Diego. Howard Pierce was elected president; Graham Humphreys, vice-president; Newton Noble, treasurer; Mrs. Howard Pierce, recording secretary and J. V. Howe, corresponding secretary. The club will meet on the third Friday of each month.

WYOMING ROCKHOUNDS NAME NEW STATE OFFICERS

Mrs. George Fellows, Rawlins, Wyoming, was elected state president of Wyoming Mineral and Rock Clubs at the June 3, 4 and 5 state convention at Casper, Wyoming. Other officers named included George Fellows, vice-president and Mrs. Gail Willis, secretary-treasurer. Rawlins was picked for the site of the 1955 convention.

ELECT REGIONAL OFFICERS

At the Rocky Mountain Regional convention of gem and mineral clubs June 11, 12 and 13 in Salt Lake City, Ralph Platt, Encampment, Wyoming, was elected president. Gail Willis, Rawlins, Wyoming, was named vice-president and Mrs. M. A. Lynch, Lamont, Wyoming, was picked for duties as secretary-treasurer.

HAND MADE STERLING PENDANTS SET WITH SYNTHETIC SAPPHIRE

Pendant with chain and stone set, choice of Ruby, Kunzite, Golden Sapphire, or Pink Sapphire.

With 9 mm. stone ($\frac{3}{8}$ " dia.), each.....\$ 5.60

With 12 mm. stone ($\frac{1}{2}$ " dia.), each..... 8.00

Ceylon or Burma Blue Sapphire—

9 mm. stone, each..... 6.70

12 mm. stone, each..... 10.00

Tiffany earrings set with round brilliant syn. sapphires (dangle type) for pierced or screwback—Ruby, Kunzite, Golden Sapphire, or Pink Sapphire.

9 mm. stones, per pair.....\$ 7.25

12 mm. stones, per pair..... 15.00

Set with Ceylon or Burma Blue Sapphire—

9 mm. stones, per pair.....\$ 9.50

12 mm. stones, per pair..... 15.00

GENUINE AMETHYST AND TOPAZ CITRINE FACETED HEARTS

Drilled for studs—

9 to 10 mm., each.....\$2.10

12 to 14 mm., each..... 2.75

Studs, sterling or G.F., each..... .25

Pendant with chain (Finished piece of jewelry) sterling or G.F.—

With 9 to 10 mm. Heart, each.....\$4.40

With 12 to 14 mm. Heart, each..... 5.00

Earrings (pierced or non-pierced) indicate wire or stud on pierced.

With 9 to 10 mm. Hearts, each.....\$6.10

With 12 to 14 mm. Hearts, each..... 7.40

SLABS AND CHUNK MATERIALS

40 to 50 sq. inches assorted slabs.....\$2.50

8 lbs. assorted chunk material

for cutting..... 3.75

Bloodstone (India), per lb..... 5.25

Slabs, per inch..... .50

Moss Agate (India), per lb..... 4.60

Slabs, per inch..... .45

Red Plume Agate, per lb..... 12.00

Slabs, per inch..... 1.30

Mexican Agate, per lb..... 3.50

Slabs, per inch..... .30

Rose Quartz (Very good color), per lb..... 1.25

Slabs, per inch..... .30

Jade (Alaska), per lb..... 6.25

Slabs, per inch..... .90

Burnite (Top Grade), per lb..... 7.40

Slabs, per inch..... .50

TEMPLATES—

sizes marked for standard cuts, ea..... 2.10

FACETING MATERIAL (Mine Run)

$\frac{1}{4}$ -lb. Sunstone.....\$1.70

$\frac{1}{4}$ -lb. Kunzite..... 2.60

$\frac{1}{4}$ -lb. Topaz (Mexican)..... 2.80

$\frac{1}{4}$ -lb. Peridot..... 6.10

$\frac{1}{4}$ -lb. Amethyst..... 6.70

$\frac{1}{4}$ -lb. Smoky Quartz..... 7.60

$\frac{1}{4}$ -lb. Apatite..... 6.70

$\frac{1}{4}$ -lb. Garnet (very good)..... 8.40

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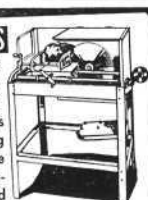
Only \$62.50 complete with 3 index plates. You can cut any faceted form quickly and easily. The equal of faceters costing twice the price.



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16" floor model, \$110
20" floor model, \$155
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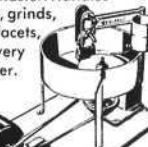
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NEW FIND—Sulphur Crystals. Nevada. Rare orange, green and yellow. Exceptional specimens 1" to 4" at 25c, 50c and \$1. Crystal groups 8" to 20"—\$3 to \$10. Postpaid. All have terminated crystals. Deposited by volcanic gases. Only locality known. Supply limited. Also Mineralights and Geiger Counters. In Reno phone 31429. Frey, Box 9090, Reno, Nev.

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I NOW HAVE over 250 rare and interesting mineral specimens and gems. Opals, agates, Garnets, Corundum, etc. Inquiries invited. Write D. J. Burrell, 2210 Yucca, Silver City, New Mexico.

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We are pleased to announce the advent of a new **Minerals Unlimited Catalog**, specifically designed for the amateur or professional prospector. If you are interested in Geiger Counters, Mineralights, Blowpipe Sets, Gold Pans or any of the other equipment necessary to a field or prospecting trip, send 5c in stamps or coin for your copy.

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MINERAL SPECIMENS, cabochons and cutting materials of all kinds, western jewelry. Beautiful travertine for bookends, paper weights, spheres etc. Write for prices. Eighteen miles south of Battle Mountain at Copper Canyon, John L. James, Box 495, Battle Mountain, Nev.

GENUINE TURQUOISE: Natural color, blue and bluish green, cut and polished cabochons — 25 carats (5 to 10 stones according to size) \$3.50 including tax, postpaid in U.S.A. Package 50 carats (10 to 20 cabochons) \$6.15 including tax, postpaid in U.S.A. Elliott Gem & Mineral Shop, 235 E. Seaside Blvd., Long Beach 2, California.

FOR SALE: Beautiful purple petrified wood with uranium, pyrolusite, manganese. Nice sample \$1.00. Postage. Maggie Baker, Kingman, Arizona.

TONOPAH, Nevada, is where C. C. Boak lives, with his outstanding scientific, world-wide collection of Mineral, Gem and semi-Gemstone species — spectacular crystal groups, etc. Visitors welcome. C. C. Boak, 511 Ellis St., Tonopah, Nevada.

ONYX BLANKS, unpolished, black 25c each; red, green, blue 35c each. Perfect cut titanium. Fine cutting and polishing at reasonable prices. Prompt attention to mail orders. Juchem Bros., 315 West 5th St., Los Angeles 13, California.

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OPALS AND SAPPHIRES rough, direct from Australia. Cutting opal, 1 ounce \$5, \$10, \$20, \$30 and \$60. Blue sapphires, 1 ounce \$10, \$30, and \$60. Star sapphires, 12 stones \$10, \$20, and \$30, etc. Post free and insured. Send international money order, bank draft. Australian Gem Trading Co., 49 Elizabeth St., Melbourne, Australia. Free list of all Australian stones rough and cut, 16 pp.

PRIVATE COLLECTION for sale. Over 250 fine specimens. See this at 548 Nevada Hwy, Boulder City, Nevada. Lewis M. Jones.

FIFTY MINERAL Specimens, ¾-in. or over, boxed, identified, described, mounted. Postpaid \$4.00. Old Prospector, Box 729, Lodi, California.

Carats, Karats Tell Value of Gold

Shop Notes and News, San Diego Lapidary Society bulletin, is carrying a series of articles on the diamond by E. G. Soukup, certified gemologist. Third in the series told the origin of the word "carat."

"The word 'carat' is derived from the Greek word *keration*, meaning 'little horn,'" Soukup reported, "which is the shape of the seed of the locust tree along the Mediterranean Sea. The Arab form for the word was *Quirat* and the French word is *carat*."

"Since the size of the seed was not uniform in the different countries, the weight varied greatly in their gem markets. At the start of the twentieth century there were at least 22 different kinds of carats ranging from the Bologna carat of 138.5 milligrams to the Arabian carat of 254.6 milligrams."

"The need of a standardized carat weight was obvious but it was not until the year 1905 that the precious gem dealers of Germany suggested an international carat based on the metric system and equal to 200 milligrams, or one-fifth of a gram."

"This suggestion was adopted by France and other European countries, and by 1912 it was used by all countries except the United States, Great Britain, Belgium and Holland which used the weight of about 205 milligrams. American jewelers used the carat weight of 205.2 milligrams until 1913 when they also adopted the 200 milligram weight. It was not until April 1, 1914, that England started to use the metric carat, and British Guinea did not start to use it until the year 1947."

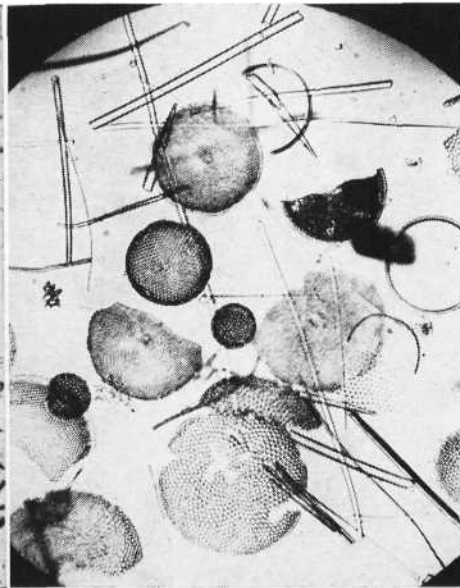
"The words 'carat' and 'karat' are two different words with two different meanings. 'Carat' indicates the weight of a gem stone. 'Karat' tells the amount of pure gold that is mixed in any alloy of gold with other metals."

"Jewelers and assayers established 24 divisions, with each division being a 'karat'. Thus if you had a ring with an 18 karat mark on it, it meant that it had 18/24 of pure gold in the alloy. Ten-karat gold indicates ten parts of pure gold mixed with 14 parts of some other alloy metal."

A RARE BARGAIN: We began collecting agates, jaspers, petrified woods, etc., back in 1920. Have around ten tons. Were going to start a trading post—now too old. We believe if you are located or will locate on a busy highway you can work over and sell for at least \$12,000.00 to \$20,000.00. Our price \$4000.00—a bargain—sell all or none. Write box 77, Inyokern, California.

URANIUM SAMPLES in quartz, agatized jasper, petrified wood, onyx, opalite, wonder rock, hi-grade gold, galena, beautiful copper. Complete set, 5 lb. bags \$1.50. 200 purple bottles, colors amethyst to royal purple, \$1.00 up. J. S. Wisdom, Dyer, Nevada.

GEMS A-PLenty: Beautiful baroque gems, large variety, tumble polished all over, \$10.00 for one pound (about 100 stones). 10 lbs. of top grade gemstone prepaid for \$7.00. Wholesale price to dealers on baroque gems and gemstone in the rough. Satisfaction guaranteed on every sale. San Fernando Valley Gem Shop, 6329 Lindley Ave., Reseda, Calif.



The fossil collectors are familiar with diatomite, a soft sedimentary rock consisting of the siliceous remains of tiny unicellular aquatic plants—millions of microscopic fossils. But few know what the plants, a type of algae, look like when alive. Several thousand species are known, differing in size and shape and each with fantastically complicated surface detail in the form of ridges, spines, holes and dimples. Left—Species of diatoms common in marine deposits; average diameter of the fossils is about .15 mm. Right—Freshwater diatoms, average diameter about .05 mm. Photomicrographs by P. W. Leppa courtesy Dicalite Division, Great Lakes Carbon Corporation.

ORANGE BELT SOCIETY INSTALLS NEW OFFICERS

Orange Belt Mineralogical Society, San Bernardino installed new officers at a recent banquet. They include Clarence Bonner, president; Peter Burk, vice-president; Alice Bonner, recording secretary; Mildred Nash, treasurer; Ora Slankard, corresponding secretary and C. T. Kennedy, federation director.

Approaching events for the society includes their annual rock show at the Industrial Building, Orange Show Grounds in San Bernardino on September 25 and 26 and Pot-luck picnics at Sylvan Park, Redlands on the first Sundays of August and September.

"Wilderness River Trail," a Sierra Club film used in their fight to keep Dinosaur National Monument from becoming a storage project was to be shown at the June meeting of Pasadena Lapidary Society.

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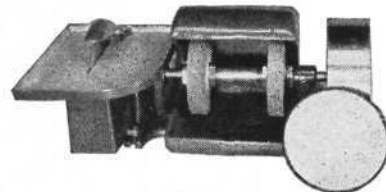
New 10-12 inch powerfeed slabbing saw unit.
16-18 inch powerfeed slabbing saw unit.
New 10 inch trim saw unit.
8 inch trim saw unit.
Plain and ball bearing belt sanders.
Send postal for free literature.

Mineralogical Society of Southern California planned its annual meeting June 12, with gem exhibits feature of activities. Included on the agenda were a silent auction, minerals sale, grab bag booth and raffle for specimens. Awards were to be given top exhibitors.

A record 9000 people visited the Glendale Gem Festival held in Glendale, California recently, in spite of many other events underway at the same time.

A June field trip of the Gem and Mineral Society of San Mateo County, was to take members in search of jasper near Morgan Hill. Each member is allowed 20 pounds of ledge jasper.

The San Jacinto-Hemet Rockhounds seventh annual Gem and Mineral show will be held in conjunction with the Farmers Fair at the Hemet, California, fairgrounds August 18-22.



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- Ideal for apartment house dwellers.
- Polish rocks into beautiful gems.
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Priced at only \$545.00 F.O.B. Compton, California

New Model DS-234 Scintillatron—The latest scintillation counter on the market. Superior sensitivity performance and calibration. **Low Price...\$467.00**
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Geiger Counters—The Prospectors Pal Model DG-2 with three scale sensitivity meter.....**\$98.50**
The only low cost counter calibrated on all three scales

Model DG-7—same as above with separate, detached probe.....**\$135.00**

METAL DETECTORS—The **Model 27** Deluxe (with meter) for prospecting for metallic minerals, gold and silver included (Depth range maximum 7 ft.)**\$110.00**

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Expecting an especially profitable trip for cabochon and facet cutters and mineral collectors, the Compton Gem and Mineral Club, Compton, California, planned a July 4 weekend expedition to the Himalaya Mine near Mesa Grande, California. Still producing, the mine has pockets of pink, green, bi-color and rubelite tourmaline.

Robert H. Rose, chief park naturalist, Sequoia and Kings Canyon National Parks spoke on "A Trek with a Naturalist Through the High Sierras" at a meeting of the Pacific Mineral Society. It was illustrated by 80 slides. He reviewed the geology of the Sierras up to the present including the origin of metamorphics, granites, canyons and glacial features.

EAST BAY SOCIETY INSTALLS OFFICERS

New officers were installed by the East Bay Mineral Society at a June 10 banquet at which Orlin J. Bell and "Hub" Dafoe shared honors as masters of ceremonies. Now at the club's helm are C. L. Cole, president; Dr. F. M. Yockey, vice-president; Dennis Patterson, secretary; Mr. and Mrs. O. R. Russell, treasurers; George Higson, historian and Frank Wilcox, Grant Howard and Sidney Smyth, directors. All but four past-presidents of the society were attending and were presented past-president's pins. Also at the banquet, active charter members were presented life membership cards. They are Bill LaRue, R. E. Lamberson, Marjorie Welch, Buster Sledge, Mrs. F. W. Buhn, Hans Hansen, Orlin J. Bell and Ernest Stone. Show Chairman Dennis Patterson reported that the society's May show was the most successful yet held. After an active summer of many field trips, the society plans to resume regular meetings again September 2.

Showing step by step methods, the movie "Polishing a Cabochon," was planned for the June meeting of the Santa Barbara Mineral and Gem Society, Santa Barbara, California. Also, Leslie Savage was slated to talk on "The Pearl" and Myra Curtis' lapidary accomplishments were to be shown.

The big field trip of the year slated by the Minnesota Mineral Club was to be an early July sojourn by bus to the Keweenaw peninsula of Michigan.

A trip to the Alabaster Caverns State Park, eight miles south of Freedom, Oklahoma, was on the docket in June for members of the Oklahoma Mineral and Gem Society.

TIN OXIDE \$1.50 PER POUND

If you buy \$5 worth of **Basic Lapidary Supplies** from the following list. A \$10 purchase entitles you to buy 2 lbs. **Tin Oxide** at \$1.50 per lb. A \$25 purchase entitles you to buy 5 lbs. of **Tin Oxide**.

Size	6x1 1/2"	6x1"	8x1"	8x1 1/2"	10x1 1/2"
80 grit				\$7.50	
100 grit	\$2.65	\$3.60	\$5.35	7.50	\$11.35
220 grit	2.95	3.95	5.90	8.25	12.50
320 grit	3.35	4.50	6.70	9.40	14.20
Shipping weight	2 lbs.	3 lbs.	5 lbs.	6 lbs.	9 lbs.
Cryston Wheel Dressing Brick 6"x2"x1".....95c					

CRYSTOLON ABRASIVE for the Lapidary . . .

Grit Size	1 Pound	5 Lb. Lots	10 Lb. Lots	25 Lb. Lots
80, 100, 120, 180, 220	\$.83	\$.52	\$.39	\$.30
2F (320), 3F (400)	.38	.57	.41	.32
Graded 400	1.09	.73	.57	.48
Graded 600	1.35	.94	.78	.69

DURITE (Silicon Carbide) ROLL SANDING CLOTH—

Available in 120, 150, 180, 220, 320 grits

Dry Rolls

2" wide, 25 ft. long—	\$2.00; 150-foot roll—	\$ 9.00
3" wide, 15 ft. long—	2.00; 150-foot roll—	13.25
10" wide, 5 ft. long—	2.00; 150-foot roll—	39.77
12" wide, 5 ft. long—	2.25; 150-foot roll—	47.70

Wet Rolls

3" wide, 10 ft. long—	\$2.00; 150-foot roll—	\$21.60
10" wide, 40 in. long—	2.60; 150-foot roll—	71.25

DURITE SANDING CLOTH in round disks . . .

Available in 120, 220, 320 grits

Wet	Dry
6" 5 for \$1.00; 25 for \$ 3.90	8 for \$1.00; 25 for \$ 2.25
8" 3 for 1.10; 25 for 7.00	5 for 1.00; 25 for 4.10
10" 2 for 1.15; 25 for 11.00	3 for 1.00; 25 for 6.45
12" 2 for 1.65; 25 for 16.00	2 for 1.00; 25 for 9.45

CONGO OR FELKER DI-MET DIAMOND BLADES

4" diameter by .205" thick.....	\$ 7.80	10" diameter by .040" thick.....	\$14.80
6" diameter by .205" thick.....	7.80	12" diameter by .040" thick.....	18.20
6" diameter by .032" thick.....	7.80	14" diameter by .050" thick.....	25.20
8" diameter by .032" thick.....	10.40	16" diameter by .050" thick.....	28.60
8" diameter by .040" thick.....	11.40	20" diameter by .060" thick.....	39.20
		24" diameter by .060" thick.....	50.60

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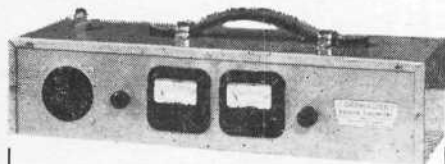
GETSINGER IS PRESIDENT MINERALOGICAL SOCIETY

Floyd Getsinger was elected president of the Mineralogical society of Arizona at a recent meeting. Other officers include M. J. Benham, vice-president; Russell Trapnell, John Weber, Walter Wells and Mary Probert, board members. Regular meetings of the society will resume in October, according to Ida Smith, corresponding secretary. At the election meeting Mary Probert, historian, displayed the first volume of the society's history. Covering the first five years, it contains clippings, photographs and copies of the Rockhound Record.

A field trip to the Red River, near Questa, New Mexico, was planned for June 19 and 20 by the Santa Fe Gem and Mineral Club. Members were to search for feldspar, gold, molybdenite and more. The June meeting of the club featured a talk on "The Identification of Common Minerals by Walt Wright.

Members of the Slover Gem and Mineral Club attempted to identify 19 rocks, all secured during club field trips, at a recent meeting in a game originated by Eugene Shepard. Rock specimens were awarded the winners, Jess Waits, Aileen McKinney, Irene Oakes and Ralph Binford. June meeting was to be a fish fry at Devil's Canyon park in San Bernardino. President Vestal Roberts announced.

A field trip to the Bloomington Crushed Stone Company Quarry was to be highlight of June activities for the Indiana Geology and Gem Society. A side trip to a nearby crinoid deposit was planned, if possible.



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Members of the San Fernando Valley Gem and Mineral Society slated a field trip to Greenhorn Mountains for Rose Quartz on July 4 weekend.

Dr. George Green, member of the geology department, City College of San Francisco, was to speak on his sabbatical year studying the geology of the Rocky Mountains from Alaska to Mexico at the June meeting of the San Francisco Gem and Mineral Society. His talk was to be illustrated with color slides.

Searles Lake Gem and Mineral Society planned a pot luck dinner at Valley Wells for a June outing. A surprise program was planned and a mystery package was to be raffled off.

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If you are contemplating searching for any of the lost bonanzas, be sure to do adequate research before you begin, you may be chasing a mirage. That was the advice given in the June issue of American Prospector's Journal which also points out that the "known value of lost and missing treasures in the earth today aggregates more than 260 billion dollars."

Members of The East Bay Mineral Society, Oakland, California, scheduled a June 19 and 20 overnight field trip to Cole's Benitoite mine, located about 70 miles south of Hollister.

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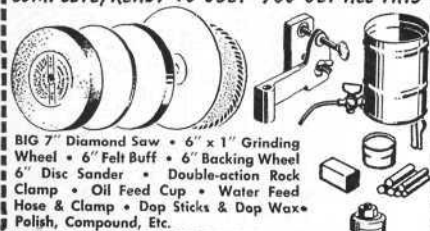
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Dave Yeomans' collection of fluorescent materials was shown under long and short wave lights as the feature of a recent meeting of the Montebello Mineral and Lapidary Society, Montebello, California.

The Earth Science Club of Northern Illinois held a panel discussion on the "Thornton Dig" at its June meeting. Discussion centered on discoveries and conclusions reached by the club archeology group in excavating a late prehistoric Indian village and burial ground in Thorne Creek woods near Thornton, Illinois, the past season.

Fifth annual show of the Compton Gem and Mineral club was planned for July 17 and 18 at Compton, California. On display were 64 cases of work by club members. Showing other exhibits were Bob Winstead, crystalized minerals; Fred Brown, lapidary and jewelry work done at Long Beach veterans hospital; Steven Stein, faceting and silver work; Howard Boblet, Sr., petrified wood; Harold Mariett, amethyst geodes and Katherine Clarke, paintings of mineral specimens.

Hollywood Lapidary and Mineral Society has set October 9 and 10 as the dates for its annual show. Elinor von der Lin is chairman.

Nominated to become officers of the Chicago Rocks and Minerals Society recently were Addison Avery, president; Alexander Leighton, vice-president; Ralph Alberts, treasurer; Margaret Gibson, recording secretary; Marilla Towne, corresponding secretary; Al Bernsohn, editor and Selma Jenner, curator historian.

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Mission Curio Mart, popular rendezvous for the rock collectors in Tucson, is to be closed until late fall, due to the accidental death of David Palmer Record, one of the owners.

Over 70 members of the Los Angeles Mineralogical Society enjoyed a display of rare silver specimens from Dr. P. A. Foster's collection at their final meeting before summer recess June 17. Dr. Foster, president of the society, talked on silver, telling of its use through history and discussing references to it in the Bible. The society made plans to have similar displays and discussions on other minerals with the resumption of meetings next fall. Beginning in September meetings will be held at the Premier Cafeteria at 6:30 p.m. on the third Thursday of each month.

"An Elementary Outline of Geology for Rockhounds," was to be the subject of a talk by Dr. Beard, geology department, Fresno State College, at a meeting of the Fresno Gem and Mineral Society.

Jeanne Martin, graduate gemologist of the Gemological Institute of America was to speak on genuine, cultured and imitation pearls at the June meeting of the San Diego Mineral and Gem Society, San Diego, California. Cal Pearson was to talk on a recent trip to Alaska and show specimens of jade found there.

More than 3000 visitors viewed exhibits at the Fourth Annual show presented by the Delvers Gem and Mineral Society of Bellflower, California.

"Stop Being Afraid and Live Longer," described as an expression of Indian philosophy, was the theme of a program enjoyed by the Chicago Rocks and Mineral Society at their June meeting. Anita Sky Eyes, Indian lecturer and entertainer, presented the program which included a lively song in her native tongue and displays of silver craft and turquoise jewelry. The evening was also a farewell party for Herbert and Oriol Grand-Girard who were moving to Santa Fe, New Mexico.

Because of increased military activity, it has become necessary to close the Marine Corps Training Center, Twentynine Palms, California, to rock hunters until further notice, according to M. R. Pilcher, commanding officer.

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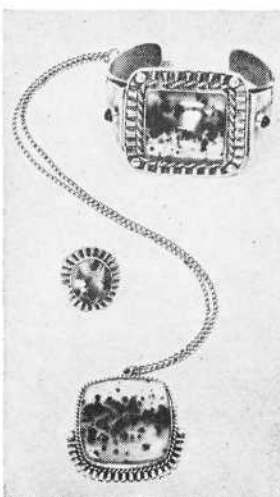
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AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

We have never believed very much in luck and therefore we cannot accept as unlucky the fact that we approach the writing of this page this time with no misgivings because it is the beginning of the 13th year that the Amateur Gem Cutter page has appeared without interruption. Through the war years, illnesses and while travelling many times to every corner of our land the column has managed to find its way to the linotype operator each month through 12 long years. We have suggested many fresh ideas that later became widely accepted and we have attempted to report fully the happenings in one of America's most interesting hobbies. Thousands of persons through those years have been attracted to the lapidary form of hobbycraft and many of those people are now earning their livelihood from some form of business catering to the rockhound hobby.

An examination of the pages of that August, 1942, issue of *Desert Magazine*, in which Amateur Gem Cutter first appeared, indicates how far we have come for in that issue Covington advertised his lapping outfit and Vreeland his diamond saw blades and that was just about all. At that time Felker made a little outfit, now gone. It was the forerunner of the many one-man bands and one-pot outfits that are now advertised. In those days lapidary outfits were all home-made and the hobbyist got as much fun out of building his gadgets as he did out of cutting his rocks. Most of the lapidary work in those days consisted of just plain rock slicing followed by polishing selected slices of the cut rocks. The year before (1941) the first rock show was held by the new Los Angeles Lapidary Society and easily 90 percent of the work shown was flats, mostly petrified wood. The other 10 percent consisted of cabochons, a mere ounce or two of faceted stones and a few novelties. And, of course, a lot of crystal specimens, for the lapidaries of those days were just mineral collectors who had gone wrong.

Harry Howard's *Lapidary Handbook* was the only book on the market that gave any information, and all the printed material on gem cutting methods that had ever been published since the invention of the printing press could have been enclosed in a legal size manila envelope.

But today there are shelves of books about rockhounding, as we now call the hobby, and there are several magazines featuring some gem cutting information, and our own *Lapidary Journal* devoted entirely to it.

Of the many books about the hobby and how to cut gems we recommend particularly the following, procurable from the Desert Magazine Book Shop: *Gem Cutting* by Dr. J. Daniel Willems (\$4.50); *Revised Lapidary Handbook* by J. Harry Howard (\$3.00); *The Art of Gem Cutting* by Dr. Henry C. Dake (\$2.00); *Jewelry, Gem Cutting and Metalcraft* by William T. Baxter (\$4.50) and the *Art of the Lapidary* by Francis J. Sperisen (\$6.50). For those who are interested in sawing and its problems there is *The Diamond Saw and Its Operation* by Wilfred J. Eyles at only \$1.20.

The ultimate in lapidary books however recently has been published in England. It is called *Diamond Technology*, written by Paul Grodzinski, and we have a few copies available in our Desert Crafts Shop for \$10.00 each. This book is a massive book

of 800 pages containing 500 special drawings and engravings and 94 special tables. It is undoubtedly the most important, the most complete and the largest work on gem cutting that has ever been printed.

It is an unfortunate circumstance, as far as the amateur gem cutter is concerned, that it was titled *Diamond Technology* rather than *Gemstone Technology* for the amateur may be discouraged from buying it, thinking it is a book about diamond cutting only. The word technology too may be a puzzling one to many amateurs, especially women who are unfamiliar with manufacturing methods and engineering principles.

The book really is an engineering book—written by an engineer for engineers. On the other hand it contains more in its 800 pages about gem cutting methods than has ever been printed before between the covers of a book. And you do not have to be an engineer to understand it.

The author has a world wide reputation as an authority on the diamond and its application to industry. The book is therefore complete in its account of diamond cutting and the making of diamond abrasives and cutting tools. But in presenting all this the fields of abrasives and abrasive principles are so thoroughly covered that practically every question an amateur could ask about any problem is answered with fair satisfaction somewhere in this big tome.

Of the 16 divisions in the book those of greatest value to the amateur gem cutter are: Grinding and Polishing Gemstones; Dividing Diamonds and Gemstones; Drilling and Boring of Holes; Carving and Engraving; Polishing Gemstones for Jewelry.

Unfortunately most of the gem cutting information is concerned with faceting. This section is the most complete and informative we have ever seen in a book. It is well diagrammed and the tables are excellent. When it comes to cabochon cutting the book is most disappointing for it almost dismisses the subject with a paragraph. After brief comments it refers to Howard's book, *The Revised Lapidary Handbook*, and to articles in the *Lapidary Journal*.

Diamond Technology is a completely revised and enlarged version of the author's first work entitled *Diamonds and Gemstone Production Methods*. That was written just after the start of World War II and in 1942 it helped the workers in Britain and the U. S. to employ gem production methods for armament use which were at that time only known on the continent of Europe. The information in that book was furthered by the founding of the *Industrial Diamond Review*, a magazine widely read in the manufacturing industries. From its inception the author has acted as technical editor and consultant. Mr. Grodzinski is also the editor of the *Bibliography of Industrial Diamond Applications* (incorporated in the *Industrial Diamond Review*) and is actively engaged in research in hardness and wear testing of hard materials, including the diamond.

There is one very important feature of this book that should be emphasized for the considerable number of amateurs who like to "engineer" their own equipment. It tells you how to make every tool and machine you will ever need in the gem cutting hobby and the back yard machinist will do hand-springs of joy when he reads the book.

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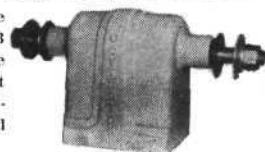
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Just Between You and Me

By RANDALL HENDERSON

I WOULD LIKE TO believe that Dama Langley is wrong—that the Hopi Snake Dances, contrary to her forecast in this *Desert Magazine*, will go on and on. But Dama knows the Hopi much better than I do—and when she says that some of the younger Indians are in revolt against the traditional religion of the Hopi tribesmen, she probably has good basis for that opinion.

Many readers of *Desert* will share my regret if the Hopis do eventually discontinue their ancient Snake ceremonial prayer to the rain gods. Not because there is anything exalting about the spectacle of costumed tribesmen circling the plaza with snakes in their mouths—but rather because those Snake Dances are symbolic of a deep-seated faith. It is never pleasant to witness the decline of religious faith, no matter how primitive may be the expression of such faith.

Primitive people all over the earth are feeling the impact of the white man's civilization. It is affecting both their economy and their religion. They are in a period of transition. In Africa during the war I found the blacks of the African Gold Coast facing the same problems of adaptation as confront the American Indians. After a few years in the white men's schools, the younger generation becomes dissatisfied with the primitive life of the jungle—just as American Indian children have become discontented with life in tepee and hogan. They find themselves at cross purposes with two worlds. They are reluctant to go back to the homes and religion of their forebears—and they have not fully adjusted themselves to the customs and beliefs of what we white folks regard as a more enlightened way of life. It is a difficult period for them.

But they must readjust, for change is a basic law of the universe. We can contribute by making sure that they have adequate schools and well qualified teachers. I feel that the missions serving the Indian people also have a very important place in this transitional period—for if the primitive faith of tribal ancestors is to be discarded there must be something to take its place. Without faith there is no progress.

* * *

If it is true that the Hopi Snake ceremonial eventually is to vanish, then that is an added reason why the Smoki Dances held in August each year at Prescott, Arizona, should be preserved. The Smoki Dances, staged by white people in costumed pageantry may have no spiritual significance, but they will have increasing historical value for all students of religion.

* * *

The controversy over the building of Echo Canyon dam in the Dinosaur National Monument goes on unabated. The Reclamation Bureau and a great majority of the residents in the upper Colorado River Basin want the dam built, because they believe it will bring added wealth to themselves. Conservation groups are opposing the

project because they feel the national park system should be preserved against commercial invasion.

I am generally on the side of the conservationists—and that is true in this instance. But my dad was a good horse trader, and perhaps I inherited some of his instinct for a fair swap.

I can think of several colorful areas in southern Utah, especially in big San Juan County which, from the viewpoints of both scenery and access, far surpass the Green and Yampa River valleys which would be inundated by Echo Park Dam. I wish Secretary McKay of the Department of Interior would bring the respective directors of the Reclamation Bureau and National Park Service together and see if they cannot work out a trade that would give the people of Utah their added wealth, and the conservationists a great new scenic playground in the most colorful region of the United States—southern Utah. Both sides would gain from such a program, and especially Utah, because the state would have both the dam and a new tourist playground which would attract far more people than now go to the Green and Yampa River canyons for recreation.

* * *

I like Utah. Perhaps it has no more scenic beauty than California—but it is not so crowded. Recently I made a 128-mile boat trip on the Green River with Don Harris and Jack Brennan—the story will be in *Desert Magazine* later—and I came home more enthusiastic than ever for the Mormon people and the way they manage their homes and their civic and religious affairs. Outside of Salt Lake City and Ogden, Utah is a state of comparatively small towns—where the social life of the community centers in home and church. It is a wholesome way of life.

* * *

Cyria and I stopped for a few hours at Harry Goulding's Monument Valley Trading post. During the last two years Harry and his wife, Mike, have installed some deluxe accommodations for visitors—guest rooms with the magnificent Valley of the Monuments in the front yard.

But Harry's main interest is always in the Navajo Indians who are his neighbors. He had just returned from Hollywood where he was trying to promote Monument Valley as the setting for a couple of more motion pictures. The movie companies provide much extra income for the Navajos when they are on location there—income that is needed by those impoverished tribesmen.

At Cameron we met Shine Smith who has spent much of his life as a free lance missionary among the Navajos. Shine was hobbling around with a cane, but his enthusiasm has never dimmed. His Christmas party for the Navajos last year was the most successful he has ever held, and he is busy gathering the contributions which will make possible another big party this year. Parcel post packages of clothes and food may be sent to him at Cameron or Tuba City, but express or freight should go to Flagstaff. Everybody in northern Arizona knows Shine Smith—and loves him.

BOOKS of the SOUTHWEST

SAME PROBLEMS AS TODAY PLAGUED TOURIST IN 1868

"The natives, it is said, never die—they just dry up and float away."

When J. Ross Browne thus described Baja Californians in 1868, he had no idea of the chuckles the phrase probably would evoke from his readers in 1954.

There is a sparkle of good humor throughout Browne's three papers, *Explorations in Lower California, 1868*, and many aspects of his adventure 85 years ago seem timely today.

Even then, for instance, tourists below the border were plagued with hiked-up prices and mercantile bamboozling—as Browne discovered when he tried to buy a few mules for his party. "The ordinary price for a good mule and *apparejo* is \$45. I was asked \$75 and \$100 for the worst mules that could be found." After much "higgling," he purchased several animals, most of which managed to live through the journey.

In the papers, originally published in *Harpers Magazine* in 1868, Browne describes his adventure in detail, from landmarks, scenery and native inhabitants to the quality of the wine, the dangers of land speculation by foreigners and the possibility of converting the arid peninsula into an agricultural paradise. The book is illustrated with numerous lithographs by the author.

Published by Arizona Silhouettes, 24 pages, paperbound. \$1.50.

FIRST WHITE MAN TO SEE UTAH'S RAINBOW BRIDGE

During his years of archeological investigation in the mesas and canyons of Monument Valley the first decades of this century, Byron Cummings met many good Indians—and a few bad ones. *Indians I Have Known* is a series of short biographical sketches of the most notable.

Besides his archeological achievements, Cummings is credited with being the first white man to see Rainbow Bridge, the fantastic natural wonder in Southeastern Utah. In one chapter of *Indians I Have Known* he tells how the old Pahute, Noscha Begay, led John Wetherill and Cummings to the bridge in 1908.

Navajo Mountain and Monument Valley are less remote today than they were in the days of Cummings' explorations. But the character of the Indians who live there has changed little in spite of their increasing contact with white civilization. Photo-

graphs of most of the Indian friends he introduces to his readers make the archeologist's personality sketches complete.

Published by Arizona Silhouettes, 56 pages, 21 photographs. Cloth binding, \$2.50; paper binding, \$1.50.

DOWN THE COLORADO RIVER 75 YEARS AGO

"Here we are, stuck again, and God knows when we will get out of it!" Francis Berton had cause to repeat the lament many times before the steamboat *Cocopah* finally reached Yuma. But the tribulations of the voyage down the Colorado River in 1878 were as interesting and amusing to Swiss-born Berton as the wonders. He relates his adventure with charm and good humor in *A Voyage on the Colorado, 1878*.

Charles N. Rudkin's translation of the delightful little book, originally issued in a 50-copy edition by the Geographical Society of Geneva, was published recently by Glenn Dawson, Los Angeles.

It reveals Berton as a kindly, perhaps slightly fussy middle-aged gentleman with a sense of humor and an endless curiosity concerning things about him.

He observes his first yuccas — "a sort of cactus . . . which look like apple trees but whose leaves look like those of palms." With equal gusto he

philosophizes about the probable origin of the California Indians or relates an amusing wash-room episode in his sleeping car. He graciously thanks Lady Luck for deferring a train robbery until the day following his passage, then regrets that he missed the show.

A Voyage on the Colorado invites its readers to step back in time 75 years and board the *Cocopah* for a fascinating voyage. Most of the fun of the trip is in meeting the delightful gentleman with the slight Swiss accent who acts as escort, guide and raconteur.

Published by Glenn Dawson, 103 pages, notes, bibliography, 10 reproductions of old lithographs. \$7.50.

KNOTS: HOW TO TIE AND UNTANGLE THEM

Not only how to tie knots, but how to unsnarl those which inadvertently slip into the line is told in Phil D. Smith's little pamphlet, *Knots for Mountaineering*.

The author, with the help of drawings by Rodney H. Smith, describes 55 knots and hitch arrangements for use in mountain climbing, camping, utility and rescue. Each knot is illustrated and its use and tying instructions given.

Simple and concise, the pamphlet is a good knot digest for the climber and an emergency guide for the camper who likes mountain wilderness areas where rescue operations are apt to be complex if accidents occur.

Published by Phil D. Smith, 24 pages. Single copies, \$1.00; three or more, 75 cents each.

Books reviewed on this page are available at
Desert Crafts Shop, Palm Desert



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By FREDERICK J. DOCKSTADER
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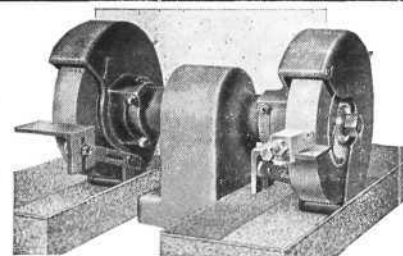
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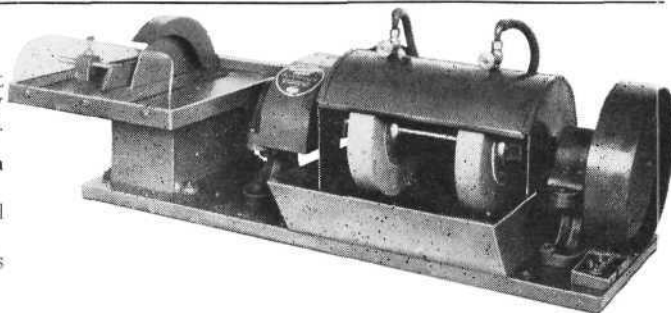
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